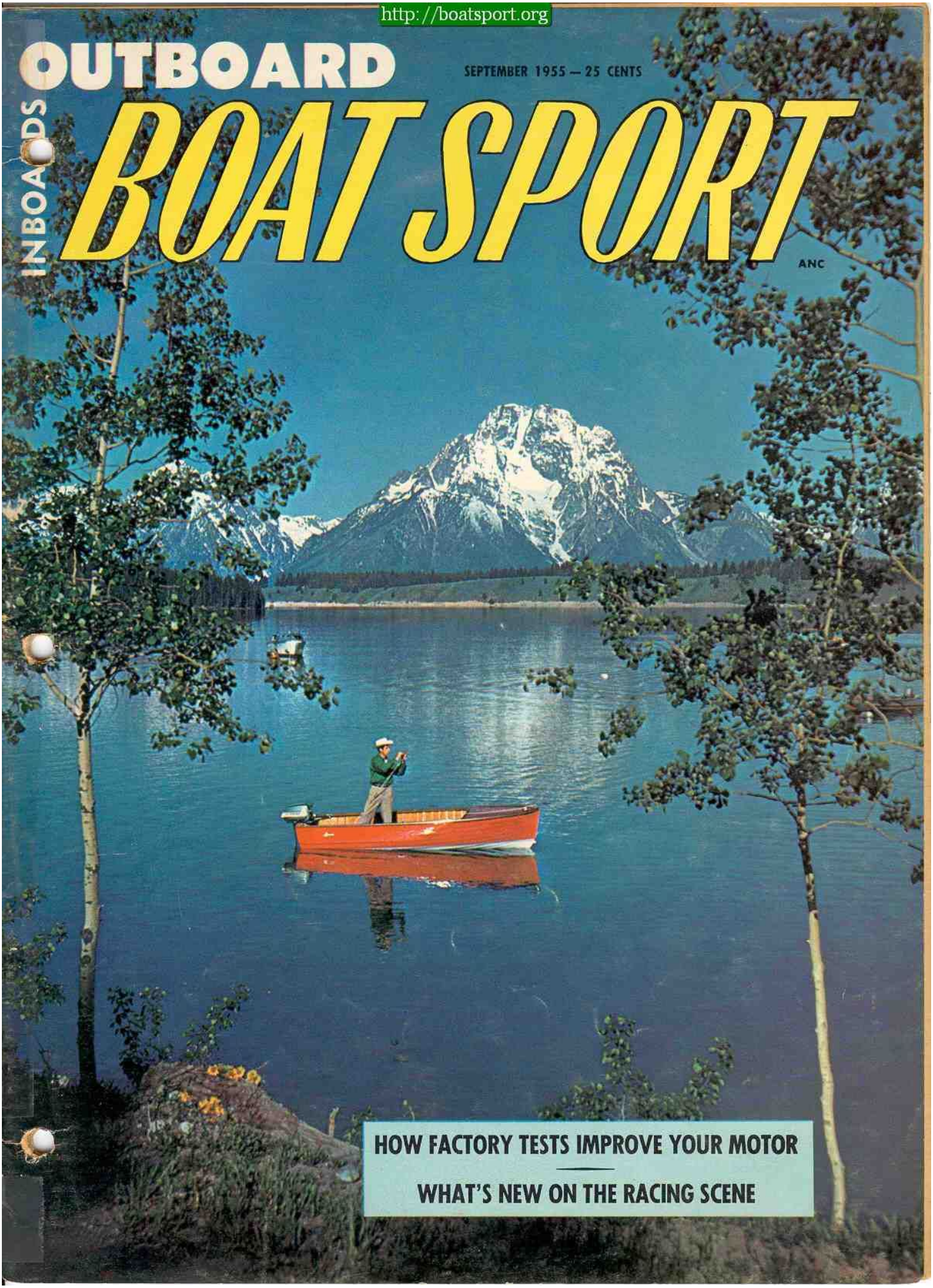
SEPTEMBER 1955 — 25 CENTS

OUTBOARD BOAT SPORT

INBOARDS

ANC



HOW FACTORY TESTS IMPROVE YOUR MOTOR

WHAT'S NEW ON THE RACING SCENE

AROUND THE BUOYS

EARLIER this season, the American Power Boat Association was nearly immobilized temporarily when its Executive Secretary, Carl Johnson, came down with chicken pox; Jack Maypole, chairman of the Outboard Racing Commission, was operated on for removal of his appendix and gall bladder; and Chairman of the Outboard Technical Committee, Walt Blankenstein, was seriously injured in an automobile accident. All three have recovered and A.P.B.A. continues to grow both in membership and number of sanctioned regattas. Though the season is still far from completed, it would appear that A.P.B.A.'s 1954 record sanctioning of 339 regattas will be increased in 1955 to over the 400 regatta mark which is a very healthy situation for drivers who want to keep their equipment on the go.

The Reeder Hotel, Florence, Ala., on May 9th and 10th was the setting for the fifth annual meeting of the Water Safety Congress which five years ago was locally organized in Nashville, Tenn., and in five years has spread throughout the entire southeastern United States. Commander Clay Clifton, U.S. Coast Guard of Nashville, Tenn., advised the group that the U.S. Coast Guard has available for boating clubs, companies, corporations, safety engineers and others planning safety programs, three 16 mm films which, except for return transportation costs, are free for public showing on application to the Commander, Second C.G. District, 228 Old Custom House, 8th and Olive Streets, St. Louis, Mo. Film requests should be submitted two weeks in advance of expected showing date. The titles are "Safety on Water," 28 minutes; "You're Being Boarded," 25 minutes, which sets forth the legal minimum safety equipment required by Federal motor boat regulations and shows boat owners and operators what occurs when their boat is examined by Coast Guard boarding officers; and "Artificial Respiration," a 12 minute film which demonstrates two methods, the Holger-Nielson or back-pressure, arm-lift method and the Emerson or back-pressure, hip-lift method.

Included in the first day's program of the Water Safety Congress was a discussion on organizing outboard cruises by Frank Peterson of Peterson Brothers, Inc., boat trailer manufacturers, Jacksonville, Fla.; a boat clinic conducted by Claude Turner, Atlanta Boat Works, Atlanta, Ga., to demonstrate to boat and motor dealers the new approach to educating customers in the proper selection of boats and motors, their safe operation and minor repairs; Care & Use of Life Preservers by Professor George Gibbens, Florence State College; and the Right Extinguisher for the Right Fire by Charles T. Chappell, Safety Branch, U.S. Corps of Engineers.

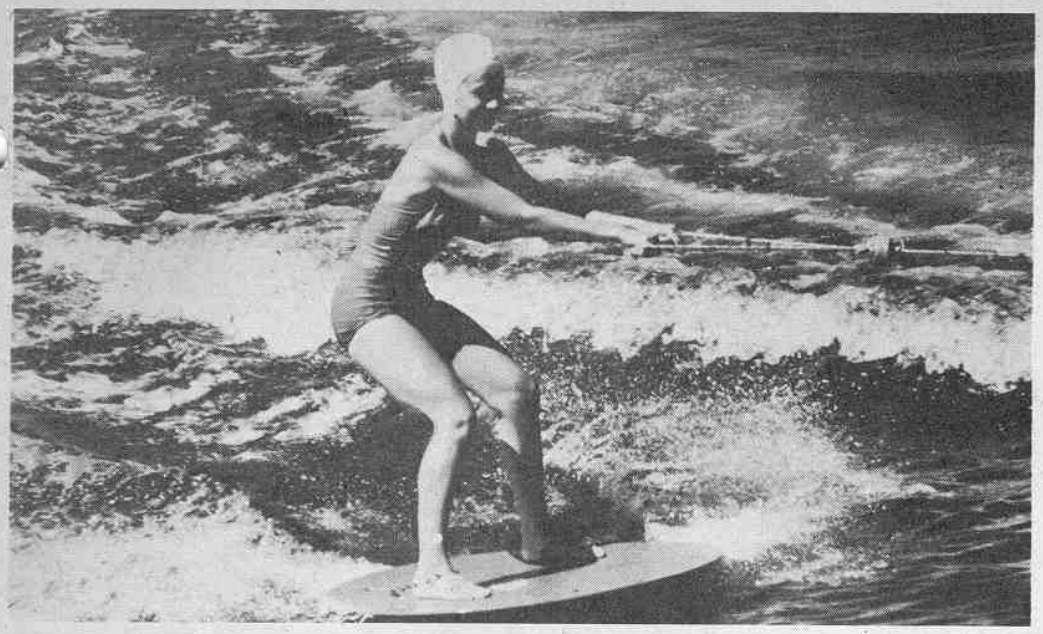
(*Continued on Page 22*)

CONTENTS

Photos in this issue reproduced by permission of Kiekhaefer Corp. (Mercury motors), Hank Wieand Bowman, American Power Boat Association, Evinrude Motors, National Outboard Association, Renee Denis, Phillip Nash, Marcel Isy Schwart, Edward Brautigam, Konig-Motorenbau (Berlin), Film Presse (Liege), Outboard Boating Club of America, Goodyear Aircraft Corp., River Queen Houseboats, Dean's Marine Engineering, Bowman, Inc., Switzer-Craft, Champion Boats, and Johnson Motors.

Joseph J. Hardie • Raymond J. Kelly, Publishers
Harold Hersey, Editor
Hank Wieand Bowman, Technical Editor
Richard Van Benschoten, Associate Editor
Russell G. Swanson, Contributing Editor
Paolo Speroni, European Correspondent
George Weaver, Art Director
Frank Ringkamp, Assistant Art Director

Sept., 1955—Vol. IV, No. 4 (Whole Number Twenty-two). **BOAT SPORT** is published eight times a year, with issues dated Mar., April., May, June, July, Aug., Sept., and Dec., by H-K Publications, Inc., 1140 East West Highway, Silver Spring, Maryland. Editorial and Executive offices: 215 Fourth Ave., New York 3, N. Y. Application for modification of second-class entry pending at the Post Office at Silver Spring, Maryland. Copyright, 1955 by H-K Publications, Inc. Although unsolicited manuscripts and pictures are handled with care, this magazine assumes no responsibility for their safety. Printed in U.S.A. **For advertising rates address:** Advertising Department, **BOAT SPORT**, 215 Fourth Ave., New York 3, N. Y. (Phone GRamercy 5-2509). West Coast Repr. **NED BRYDONE-JACK**, 714 W. Olympic Blvd., Los Angeles 15, Calif. (Richmond 8-7327.) **Subscription rates:** Annual (8-issue) subscription $2.00 in U.S.A. and its possessions and territories—$2.40 in Canada and elsewhere. Two-year (16-issue) subscription $3.50 in U.S.A. and its possessions and territories—$4.30 in Canada and elsewhere.

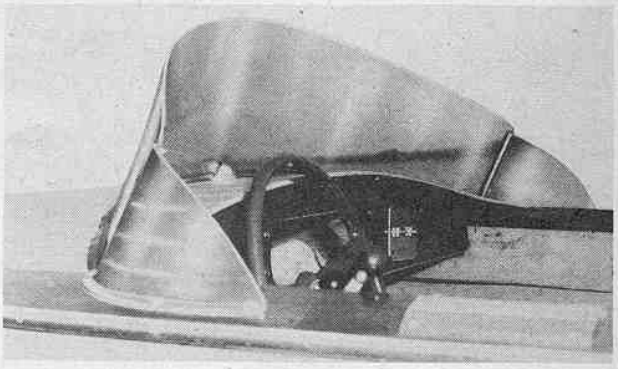


The White Bear Fly-N-Saucer pulls easily behind motors in the 10 hp to 22 hp range. This type of water sport is full of new-found thrills.

First released view of the new Champion Blue Streak "Hot Rod" ready for action on a Van Pelt hull. Models were developed exclusively for racing in JU and in BU.

(Below) Nautalloy ready-cut, wrap-around windshields are made of Plexiglas. Used with special brackets, they are said to fit all deck lines.

It's NEWS



READY-CUT WINDSHIELDS

Curved, wrap-around windshields of scratch-resistant plexiglas are being made by Aluminum Marine Hardware Co., Inc., Auburn, N. Y. These Nautalloy windshields are said to fit any shape of outboard boat when used with Wrap-around Style Nautalloy Windshield Brackets No. 702 or No. 703. Chrome-Edge, a plastic-chrome edging, comes with each package for trimming the top of the windshield. Plexiglas in the windshield is available either clear or tinted.

RACING AND NITRO FUELS

Christopher Bros., 12800 Eaton Ave., Detroit 27, Michigan, long-established producers of specialized racing fuels for outboards and inboards, now has available nitro fuels for all types of boat racing engines. Further information regarding these Chris-Go products can be obtained by writing to the firm at the above address. For readers who are interested in the subject, we refer them to the March-April, 1955 issue of BOAT SPORT, in which the article "Nitro Fuel for Added Speed" appeared.

NEW BOAT TRAILER

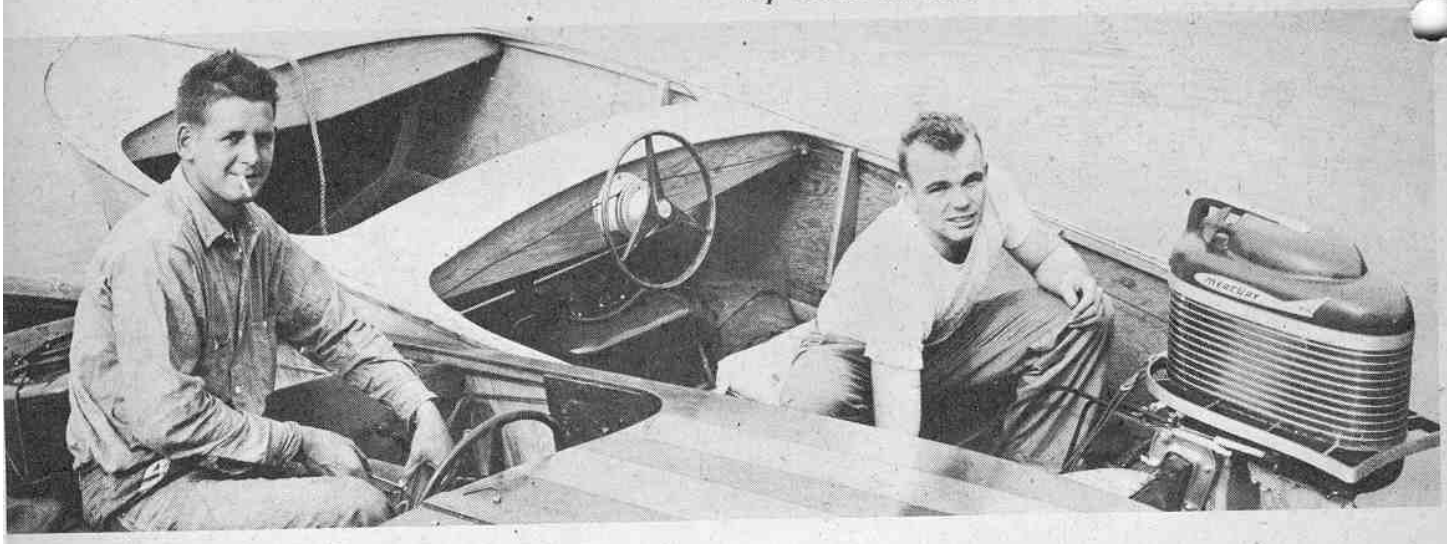
The W. H. Miller Corporation, P.O. Box 218R, Irving, Texas announces a new line of boat trailers called Miller-Matic, designed to automatically launch from the trailer's own ramp by merely pulling a release cord. The new trailers are available in four sizes, 500, 750, 1000 and 1250 pounds load capacities with prices ranging from $179.50 to $246.50 f.o.b. Twelve-year-olds have reportedly loaded 1000-pound outboard outfits on the new trailers with ease.

(*Continued on Page* 31)

A REPORT ON KIEKHAEFER CORPORATION'S SOUTHERN PROVING GROUNDS FOR OUTBOARDS

By Hank Wieand Bowman

HOW FACTORY TESTS IMPROVE YOUR MOTOR



Test drivers are young and unmarried; most of them are ex-stock racers.

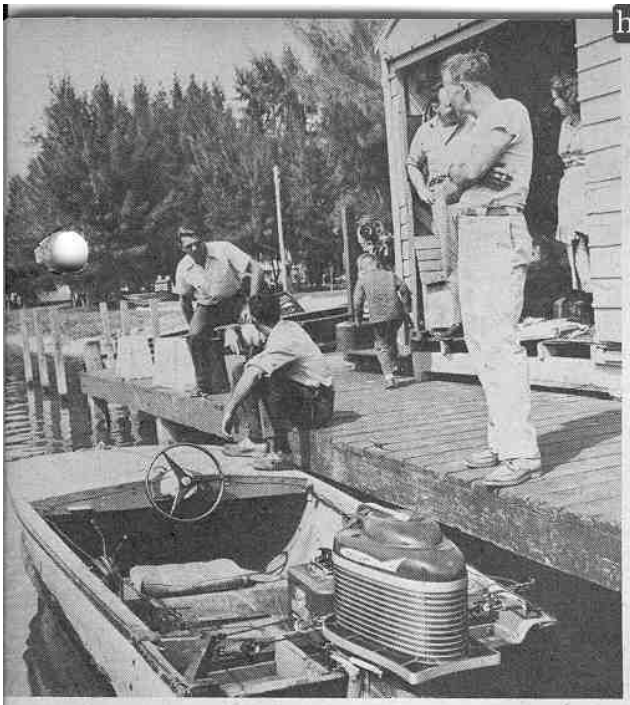
FIFTEEN MILES southwest of Sarasota, Florida, on a little spit of land less than a half mile long and a hundred yards wide, is the Midnight Pass location of an outboard motor and boat proving ground. Few people other than the local charter boat fishermen, many of whom have earned their living for the last half century in the Gulf of Mexico waters, pay any attention to the cluster of a half dozen small cottages, boat slips, piers and miscellaneous modest buildings dotting this isolated peninsula. Yet the tests conducted here by a permanent crew of eight men all year round and as many as several dozen during the winter months, have a direct bearing on the durability and general operating efficiency of the boating equipment of many pleasure boatsmen, fishermen and racing drivers throughout the country.

This particular test grounds is the Kiekhaefer Corporation's Southern Proving Grounds, where current models and models for future release are given the toughest imaginable treatment to improve the breed. Other major outboard motor manufacturers maintain similar proving grounds. Just what the manufacturers are doing and how they are doing it, we feel, is of vital interest to every outboard motor owner or prospective owner.

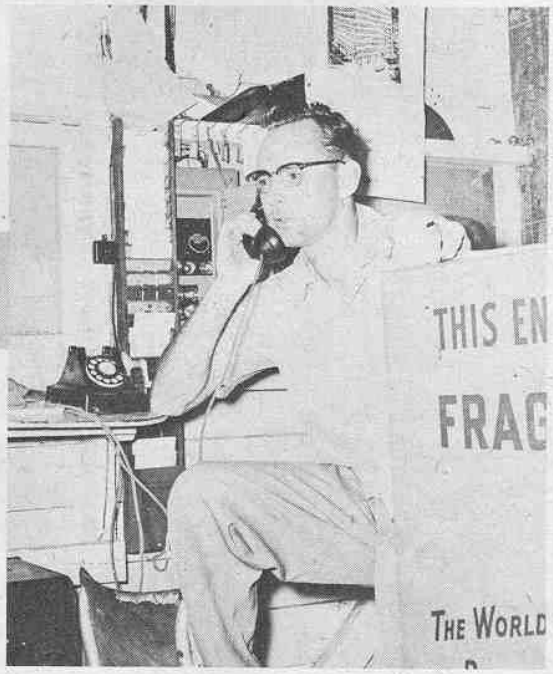
BOAT SPORT made arrangements with the Kiekhaefer Corporation to visit its Midnight Pass Southern Proving

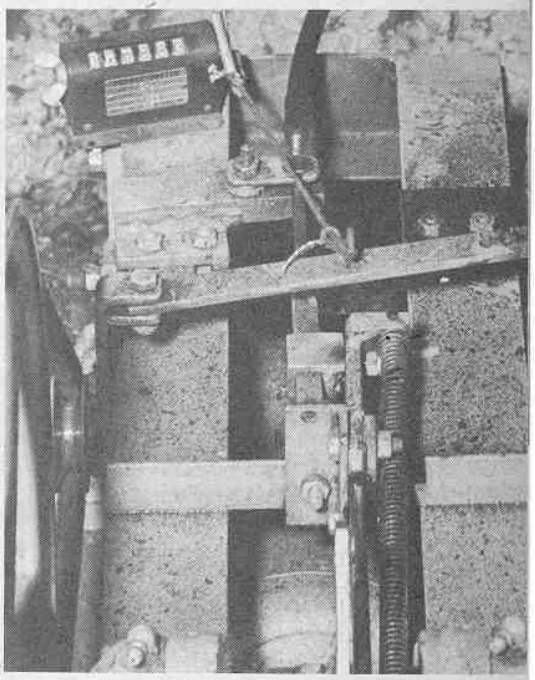
(*Continued on Page* 6)

Author Bowman at the wheel; Engineer Jim Wynne beside him; Kiekhaefer's Vice-President Armand Hauser and BOAT SPORT's Blake Gilpin in rear.

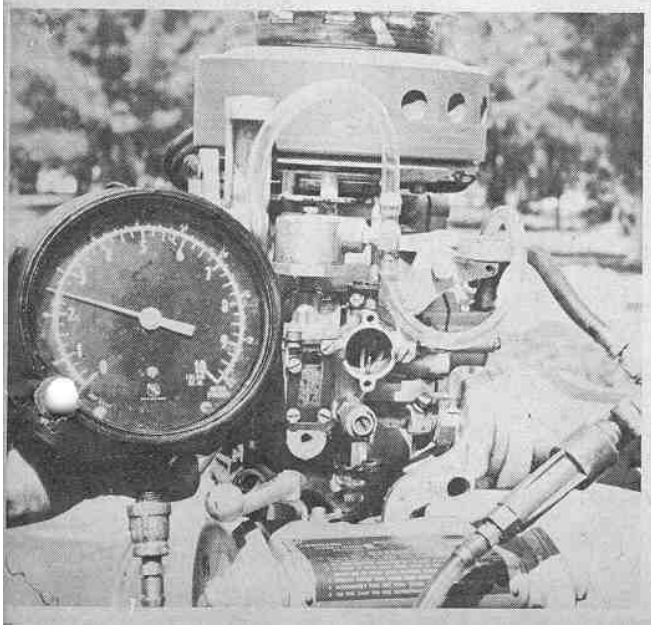


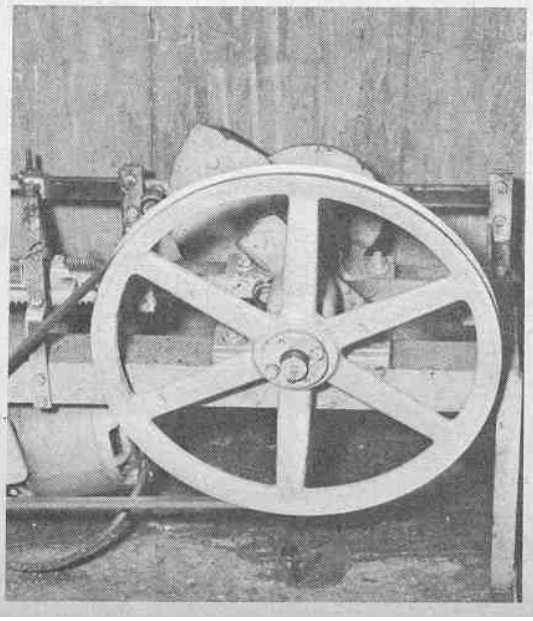
(Far left) "Reds" Anderson is the cook at the Proving Grounds. Her five children are the only ones around. (Left) Mechanics are all set to make fast repairs to keep tests going.



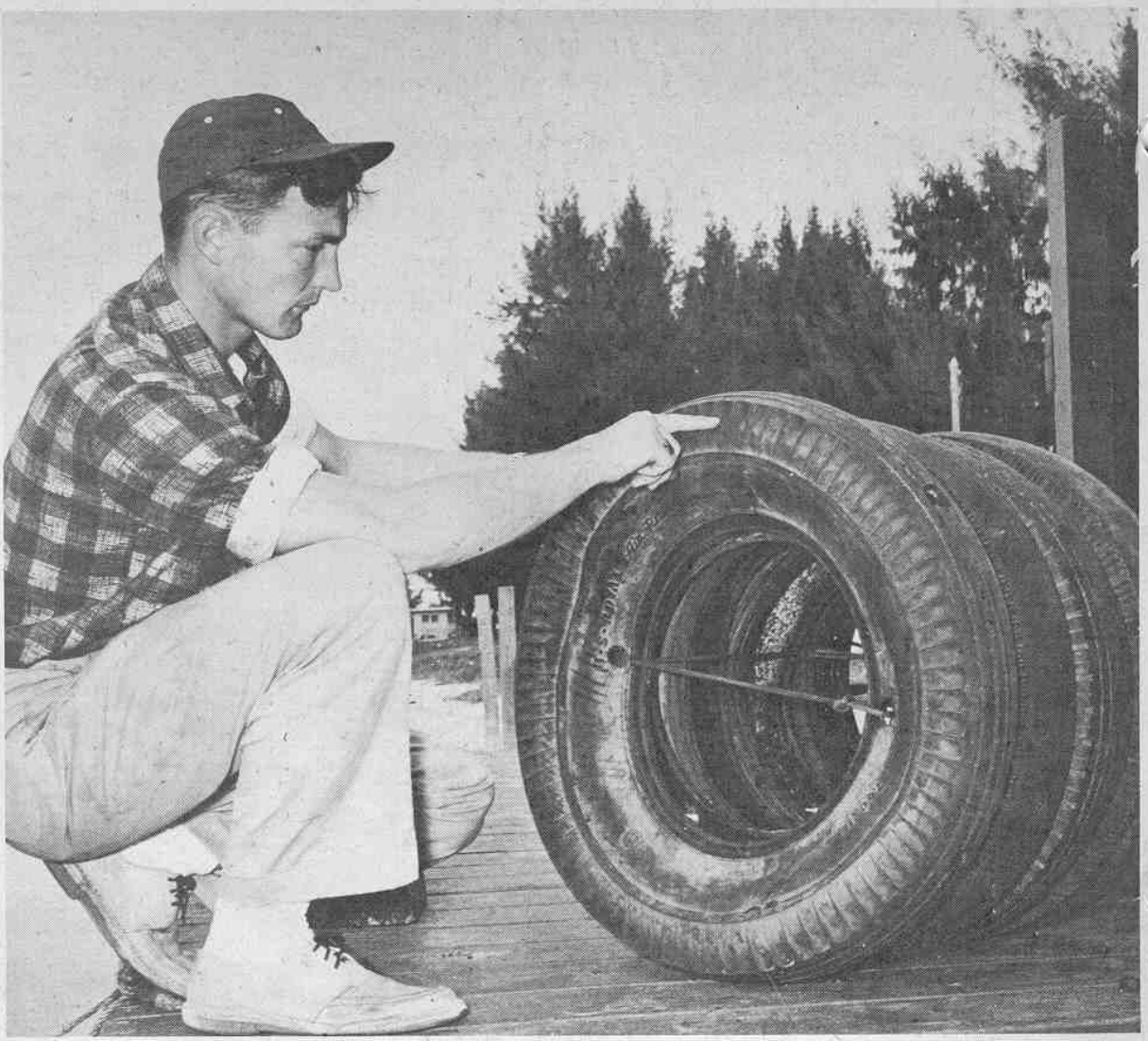


(Right) Jim Wynne, the engineer-in-charge, and his crew dream up fiendish tests to try out motors. (Far right) Robot shift control mechanism puts motor through a constant forward-neutral-reverse shifting. This one has completed 40,880 complete shifting cycles.





(Far left) For study of fuel flow, plastic fuel lines were put on and glass window installed in bowl of carburetor. Gauge is used to check pump. (Left) Another view of automatic tester for the new gear shifts.



Don Henrich, propeller and lower unit expert at the Proving Grounds, looks over tire lash-up for mounting bracket trials.

HOW FACTORY TESTS IMPROVE YOUR MOTOR

(*Continued from Page* 4)

Grounds for Mercury motors, with the understanding that its reporter should have free access to all phases of the tests being made.

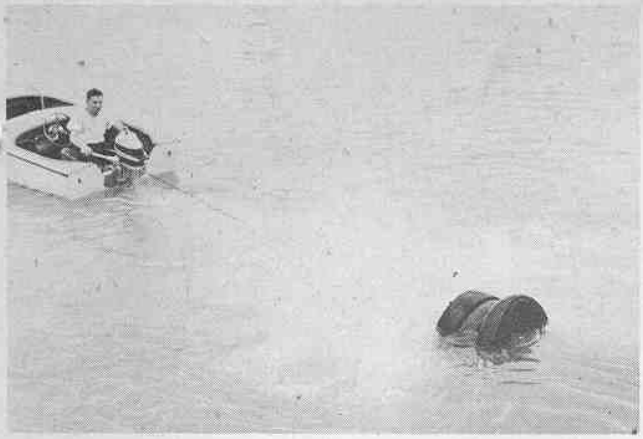
One of the first questions I asked on arrival at the isolated location was why Midnight Pass had been selected. The boat moorings, boat houses and repair facilities are located approximately a mile's run by water from the entrance to the Gulf of Mexico. On occasion, the normally placid Gulf can behave like an ocean and the test crews must confine their operations to the miles of more protected inland tidal waters fringing the Gulf. However, these inland waters are not used extensively for general navigation; in only a few instances are channels marked and, though miles of open protected water exists, much of it is loaded with stump growth, tangles of mangrove roots and reefs.

This situation made me wonder why some nice deep fresh water inland lake wouldn't be easier on equipment and better suited for underway testing. After all, propellers and lower units are costly items—even for their manufacturer. Jim Wayne, the engineer in charge, who is a graduate of the University of Florida and also holds a masters degree from the Massachusetts Institute of Technology, explained that, primarily, the tests are conducted to check current and new models for exposure, endurance and the roughest conceivable type of operational usage. Wynn explained that at the Oshkosh Kiekhaefer plant, extensive underway and tank testing is also conducted but certain disadvantages surround that Wisconsin test facility where the water is fresh. Since much outboarding is done in salt and brackish water, which is far more corrosive in its reaction on motor parts than is fresh water, testing must also be conducted under more rugged salt water conditions. Thus, since much outboarding is done in shallow, uncharted waters, the Midnight Pass location is uniquely suitable to simulate the roughest conditions under which an outboard motor should be expected to operate.

Jim said, "Our job isn't to nurse the motors along and try to make them last but rather to give them the minimum of maintenance that could be expected from the most casual, mechanically untrained operator. We then run the hell out of the equipment with no pampering, break up motors if possible and then report on why, how and when they failed so that the plant engineers can design greater durability and ruggedness and overcome any possible design flaws."

Joe Anderson, a native Floridian, has been in charge of the year-round operation for the last eight years. He, like the rest of the test crew, lives in one of the group of cabins on the isolated peninsula. His wife, Red, is the only woman member of the set-up. Red cooks for the crew and sets up a bountiful table that would handle the voracious appetites of a logging gang. Joe and Red's five children are the only youngsters in the establishment and since they are crazy about boats, the place is strictly a kids' heaven for the Anderson children.

(*Continued on Page* 23)



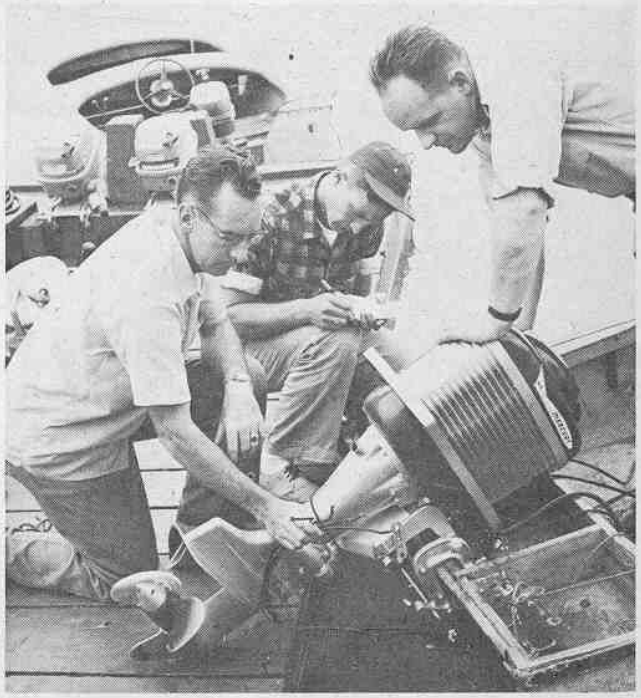
In test, tires are suspended just below the surface so that boat is not subjected to undue shock. Test is for lower unit and bracket.

Test driver smacks viciously into hurdle, with throttle wide open. Impact is terrific and driver must have a steady hand and nerves.

Driver steals a look backward at the motor, for if the mounting bracket is destroyed he must be ready to duck a flying powerhead.

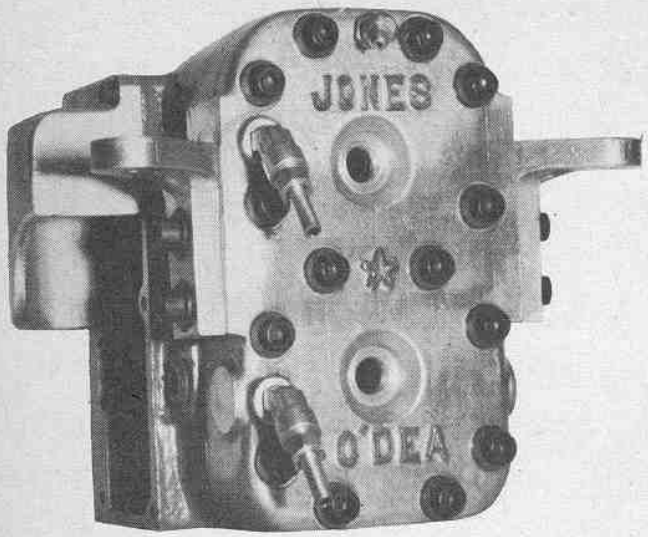
Steel-filled cables restrain the upward travel of the motor, and then it slams down against the transom with sledge hammer force.

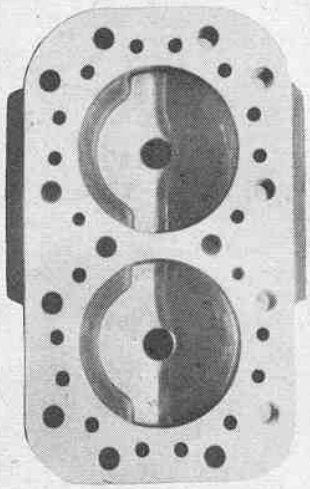
Test driver Joe Anderson inspects sheared propeller blade that temporarily interrupted testing until a replacement was put on.

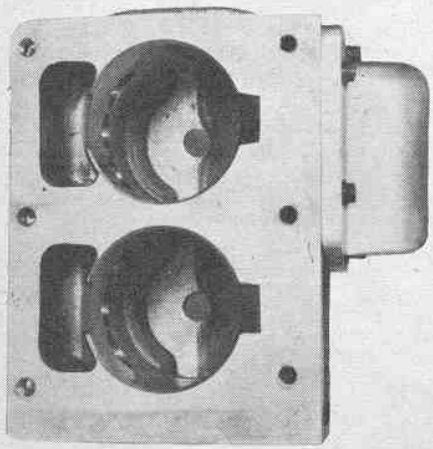


Jim Wynne, at left, shows how the shock snapped the steel-filled tie-down cables. New mounting bracket was intact after 102 passes.

(Below) The new Jones-O'Dea Red Head block and cylinder kit for converting Mercury KG-7s and 20Hs. (Center) Interior of Red Head unit shows contouring of removable aluminum head. (Bottom) Large, smooth intake ports of kit's block casting.

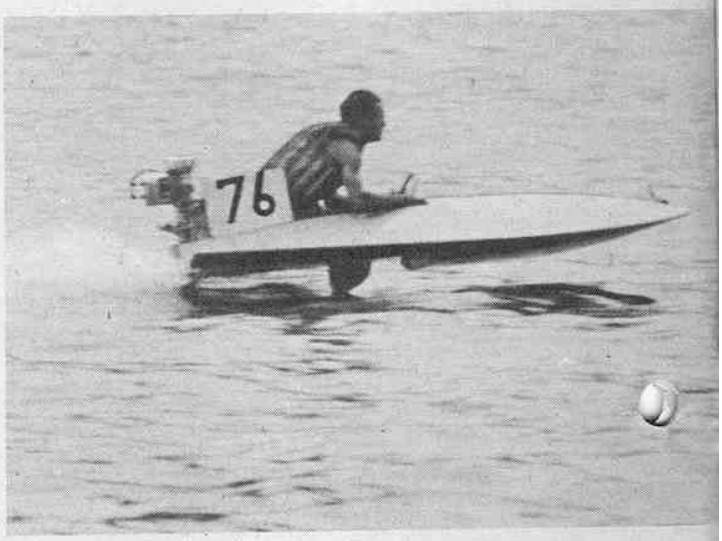






(Right) Possible European challenger is Charles Largefeuille, Belgium. This is his specially designed Triumph Speed Twin.

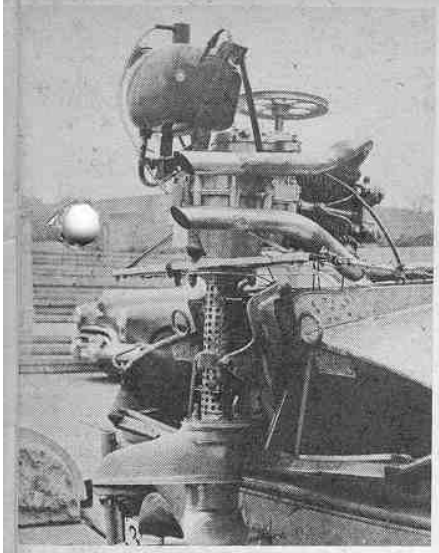
König Class A and B racing motors are up for N.O.A. approval. Here European champion Götzinger drives one of the German A models.



WHAT'S NEW ON THE RACING SCENE

AN ENGLISHMAN, John Ward, in 1924, was responsible for laying the initial groundwork for what ultimately became the Union for International Motorboating, the recognized international rules governing body for the speedboating sport. Ironically enough, John Ward had died by the time the U.I.M. was formally organized in 1927. In recognition for his contribution to boat racing, the John Ward Trophy, a handsome piece sculptured from Italian marble, was put into competition by the U.I.M., emblematic of the world's Class C title. For three years the United States, which is recognized by the U.I.M. as being pre-eminent in the field of outboard racing, has been honored as the locale of the race.

During these three years, 1952, '53 and '54, the American Power Boat Association, U. S. member body of the U.I.M., has sanctioned the event as a special added feature at its National Championships. Previous winners in-



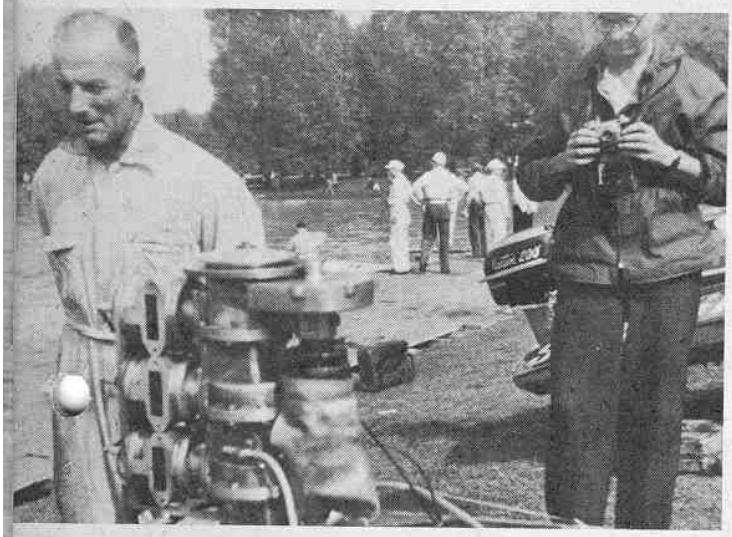
FOREIGN COMPETITION LOOMS FOR WARD TROPHY.

GERMAN KONIG MOTORS UP FOR U.S. ACCEPTANCE.

JONES-O'DEA RED HEAD SPEED CONVERSION KIT.

By Henry Hotchkiss

European Class C champion Dieter König drove this 3-cycl.-in-line motor to a U.I.M. record of 65.02 mph; may seek Ward Trophy.



(Below) Doug Creech, Charlotte, N. C., set the world's record for John Ward Trophy heat in '53: 62.5 mph. Trophy in left foreground.

clude Paul Wearly, Doug Creech and Hap Owens, driving Paul Cornwell's outfit. Creech won the trophy in 1953 and also established the still-standing Ward Trophy record five-mile heat speed of 62.500 mph, at Biloxi, Miss., driving a Johnson-powered Neal three-pointer.

The John Ward Trophy race has again been assigned to the United States in 1955 and will be raced in conjunction with the A.P.B.A. Nationals. The event is conducted under the international Class C motor and boat specifications rather than the A.P.B.A. Class C rules, which permit a greater freedom in design of lower units and also allow a total engine displacement of 500 c.cs (30.5 cubic inches) as opposed to the A.P.B.A. 30 c.i. maximum.

Carl Johnson, Secretary of the A.P.B.A., has received correspondence from the Deutscher Motorreunboat Club of Berlin stating that Peter Dieter Konig and at least one other German driver desire to compete for the Ward Trophy. It is possible, too, that Charles Largefeuille of Liege, Belgium, and the French driver Pinand may also enter their outfits. If so, defending trophy holder, Hap Owens and the other United States alky-burner drivers may expect some real competition in an event with true international significance.

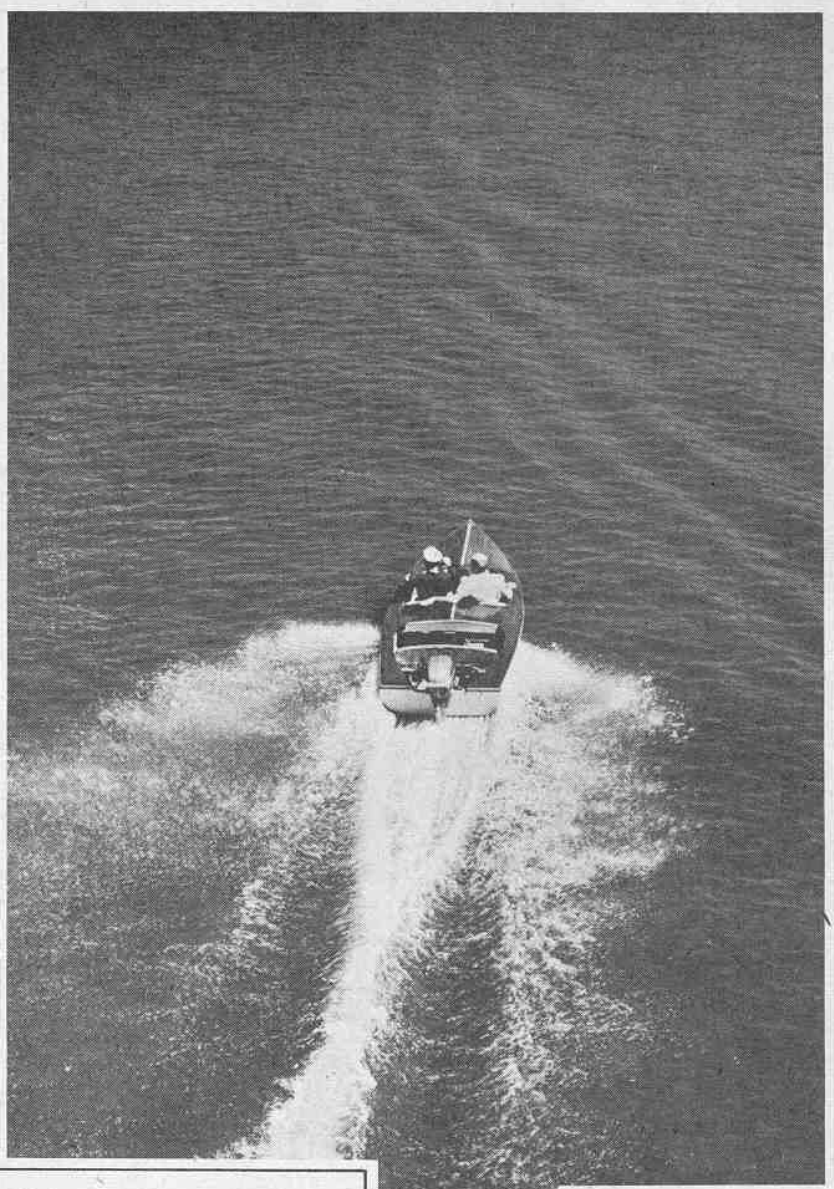
Konig recently drove his three-cylinder-in-line Konig motor, a triple carburetor, two-stroke job equipped with an interesting six-cylinder four-stroke Scintilla magneto, to a new U.I.M. world's straightaway mark of 73.62 mph and an average of 65.02 in closed course competition. These compare to the A.P.B.A.'s Class C records of 68.631 mph and 60.729 mph for the mile and five mile

Claude Fox, Secretary of the National Outboard Association, reports that he, too, has been contacted by Konig and other Europeans who have expressed a desire to compete in the N.O.A. alcohol burning World Championships which have been set for Mt. Carmel, Illinois, September 18th through the 20th.

Meanwhile, Konig - Motorenbau of Berlin, which makes a 250 c.c. Class A motor, as well as a 350 c.c. B and 500 c.c. C racing motors, has filed specifications with the N.O.A. for acceptance of the Konig A (actual displacement 244 c.c.s) in the N.O.A.'s Class A Division I. Fox has stated that the motor will definitely be approved for N.O.A.'s World Championships, at which time it is hoped that Seigfried Gotzinger, European Champion, will compete. The motor is an alternate firing twin, with rotating slide valves which at 7000 rpm reportedly develops 22 horsepower. The Konig factory conservatively rates the motor, which has a neatly designed 1:1 gear ratio, at 53 mph, with alcohol fuel, on the average three-pointer. What the actual potentialities of the Konig motor

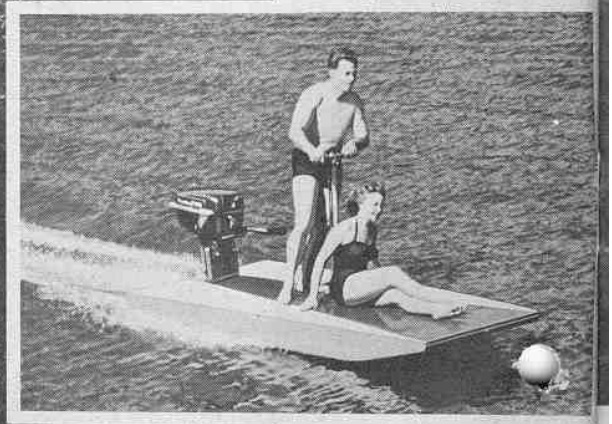
(*Continued on Page* 26)

OUTDOORS WITH THE OUTBOARDS

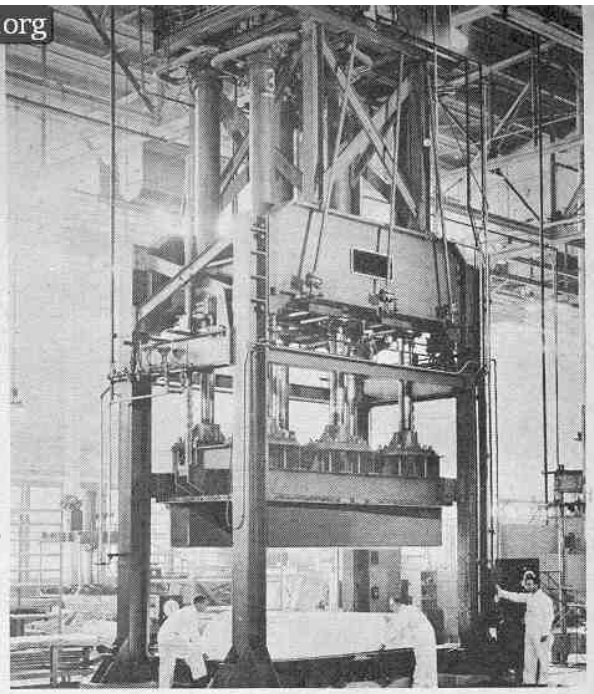


BOAT SPORT welcomes John G. Kingdon, well-known boating authority, writer and naval architect, as a member of our group of regular contributors. We know that our readers will find his articles always informative and always interestingly worth while.

This photograph, taken on the Wabash River by David L. Lawson, won 1st prize in Evinrude's '54 Boating Photo Contest.



Scamp, an outboard-run surfboard, can carry 3 people. Operator steers by shifting his weight.



Double-cockpit version of Bowman's new 16-ft. plastic boat, shown above, has its one-piece hull made on the huge 700-ton press of Goodyear Aircraft Corporation at its Akron plant.

By John G. Kingdon

WITH THIS issue, Dick Van Benschoten, who originated *Outdoors with the Outboards* and has so capably conducted it up to now, moves upstairs to take a more active part in the overall editing of BOAT SPORT. Congratulations, Dick; it couldn't happen to a nicer guy!

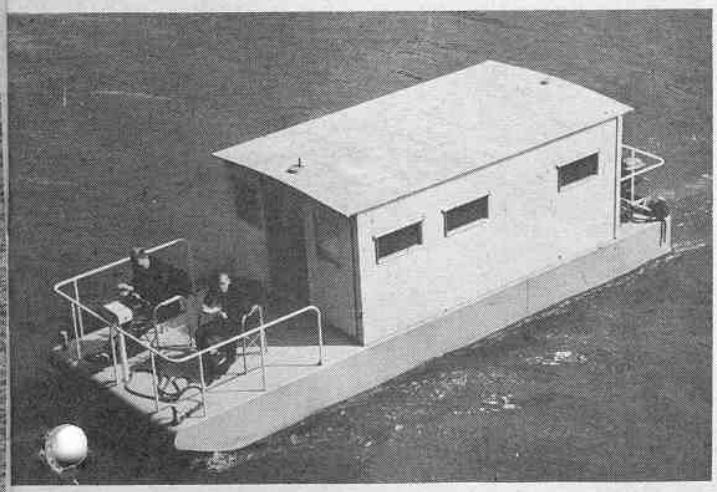
The only promise that this unworthy scrivener can make is that he will attempt to the best of his ability to carry on *Outdoors with the Outboards* as nearly as possible in the popular tradition you established.

WHEN WE consider outboarding, we usually think of it as being composed of but three types of craft—the racing boats that skip wildly around closed courses; the runabouts that bustle busily about transporting fishermen, towing water skis or carrying families on days' outings; and the planing cruisers that effortlessly eat up miles of water each day. But there are other types of craft that depend on outboard motors for their power—and some of them are very much in the news today.

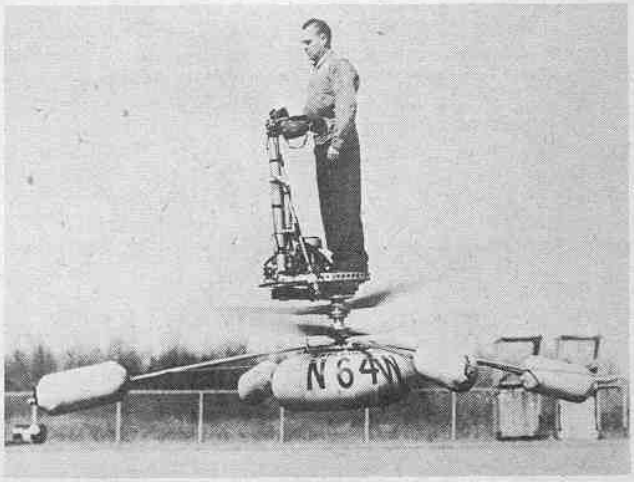
Perhaps the most unusual of these is the Heli-Vector, a Mercury-powered one-man amphibious helicopter developed by Lewis C. McCarty, Jr., for de Lackner Helicopters, Inc., Mount Vernon, N. Y., and Aero-affiliates, Inc., Fort Worth, Texas. In the Heli-Vector, the pilot stands on a platform, steers with handlebars and sends the craft forward or backward by shifting his weight. This radically new principle of guidance is known as the "stand-on" or "vector" system. The Heli-Vector, first aircraft of this type to fly, has gained an altitude of 15 feet with a Mercury Mark 20 outboard motor. With a more powerful Mercury Mark 55 outboard, McCarty expects to attain a ceiling in excess of 10,000 feet. When the outboard motor roars into action, two 15-foot blades counter-rotate like a whirligig. A large central float and four smaller extended floats support the helicopter on either land or water. McCarty's first interest in developing the Heli-Vector was for rescue work and ferrying, but there is widespread interest from conservation officials and farmers who want Heli-Vectors for spraying, fertilizing and seeding.

A COMPARATIVE newcomer on the outboard boating scene is the houseboat. The one shown here is manufactured by the River Queen Boat Works, Gary, Indiana. Its 24x8-foot hull is made of steel and draws but 5 inches of water. The plywood cabin, which is made airy and pleasant by nine screened windows, contains a galley with ice box, sink, 30-gallon fresh-water tank and lots of storage space; an enclosed lavatory with water closet and wash basin; a

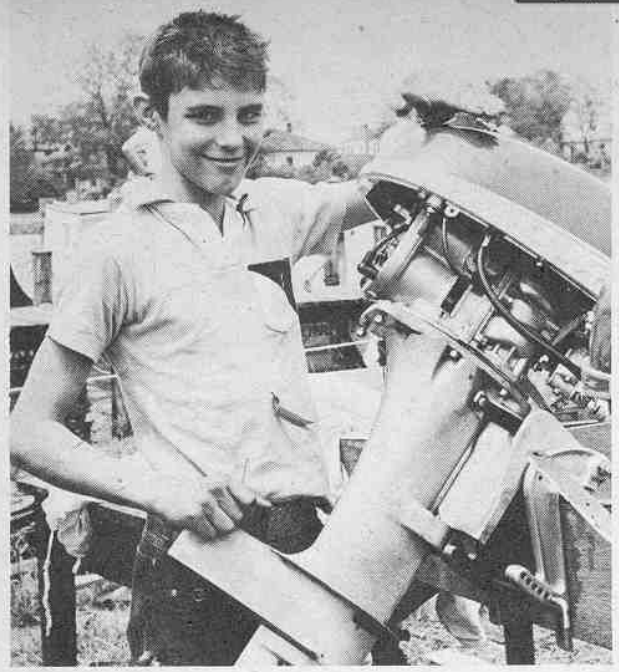
(Continued on Page 28)



The River Queen outboard houseboat does 10 mph when powered by a 16 hp motor. It affords facilities for three to live in comfort.



"Upstairs with the outboards" could apply to this Heli-Vector, a one-man, amphibious helicopter powered by a Mercury Mark 20 unit.



Fifteen-year-old Craig DeWald, Reading, Pa., won the Class A event in his homemade "Flying Chips" that won '54 Winnebagaland.

Carl Dowe, Norfolk, in his Evinrude-powered, homemade CU hull, won WNOR perpetual trophy with 37.905 mph average.

(Above) B. Scott Straus, Severna Park, Md., won the shortened, 36-mile B Stock Hydro event. (Below) Eddie Few, Princess Anne, Va., won the "36" Class. Sebago strip-built hull has 1' metal bow added to meet specs.

AZALEA FESTIVAL MARATHON

BAD WEATHER MADE A TOUGH GRIND OF ANNUAL NORFOLK DISTANCE EVENT

By Blake Gilpin

Referee Albert A. Bauer, of A.P.B.A. council and member of the Gulf 100-Mile-an-Hour Club, wisely curtailed the DU and BU events to 48 miles after small craft warnings had been posted for area.

Paul Rothenberger, Reading, Pa. being congratulated at the finish line for his BU first place by AU winner Craig DeWald.

Les Kahn, New York City, in his Mark 40H-powered Raveau hull, averged 43.392 mph to win DU. Drove 18 m. with broken bowdoin cable.

STRATEGY, luck and intestinal fortitude played major roles in determining the winners of the Tide Water Motor Boat Racing Association's annual marathon at Norfolk, Virginia, where everything happened and the ingenuity of the competitors was severely tested. Appropriately enough, Carl Dowe, Secretary of the sponsoring association, drove his homemade Class CU Evinrude-powered hull to the closest approach to a speed record over the four-lap, originally specified 64-mile-course laid out from Granby Street Bridge, Norfolk, to the West Norfolk Bridge and return. Approximately one-third of the 16- mile lap distance covered a partially protected stretch of the Lafayette River. The roughest section included nearly 6 miles of open bay, then a sweep into the Elizabeth River channel and a dog-leg up through the Western Branch of the Elizabeth River and return.

Dowe averaged 37.905 mph for the 64 miles, to come within a mile per hour of the established speed record for the distance in his class, and won the Radio Station WNOR Perpetual Trophy. This was Dowe's sixth year in competition and his first major win. His homemade hull, called "Inez E. III," was powered by a Speeditwin Evinrude with a 13:18 gear ratio(many of the Speeditwins are equipped with 15:21 ratios).

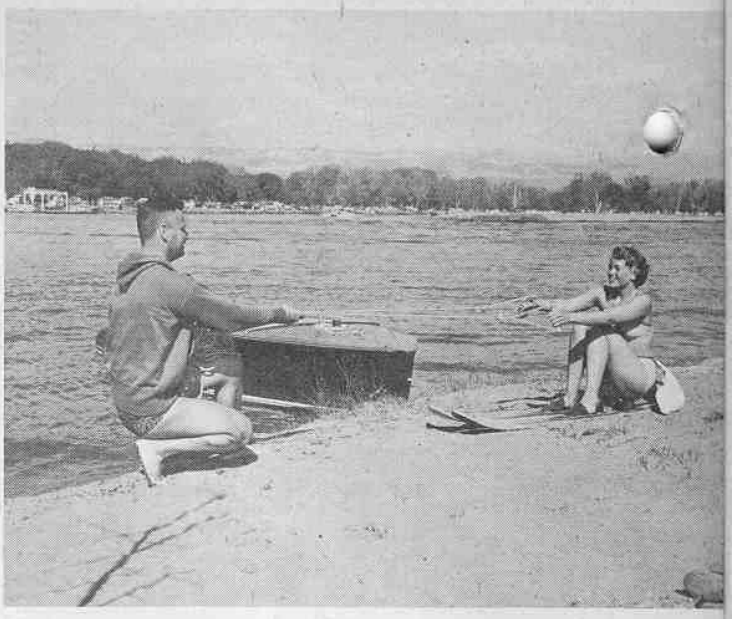
One of the most popular of the class winners was Craig DeWald, Reading, Pa., high school student, who drove his "Flying Chips," a Mercury-powered runabout he built himself, to a 34.141 mph average and a class win over fourteen other AU contestants. Fifteen-year-old DeWald, who won last year's Winnebagoland in his class, did not come by victory at Norfolk the easy way. The relatively placid waters of the Lafayette River were only showing white caps, but the open bay was really rolling. DeWald, at the end of the first 16-mile lap was running in eighth position, with Bob Acra, Portsmouth, Va., leading in "Bob Cat." Close behind the leader was George F. Mitchell, Jr., local driver, in "Here's Me." Mitchell, Sr., who was competing in the "36" class, had already flipped when a steering cable let go. For a time it looked as though the Mitchells were doomed to the D.N.F. column for, in the second lap, George, Jr.'s transom tore loose and he was forced to beach his boat. But a little thing like a flapping transom wasn't going to stop George, Jr.! He used a section of his tie-down line to secure a transom knee to a frame member, got started again and fantastically enough, finished in third spot, just 12 seconds behind the ultimate winner, DeWald.

DeWald, meanwhile, was having his own problems. He really did some tight-fingered throttle squeezing during the second lap, passed seven other boats and, at the end of 32 miles, was riding out in the van. Then his hull began to leak. The plywood transom started to separate from the terrific beating, and DeWald alternately bailed one-handed while steering with the other, with his throttle locked wide open. Between bailing stints, he held onto the transom in an attempt to prevent the split from spreading. This may sound like he was using three hands; he *needed* three hands to keep going.

On the final lap, with the race seemingly in the bag, and with less than five miles out of the sixty-four to cover, despite all his heroic efforts, DeWald's motor spluttered and died. The excessive pounding had split a fuel line and the youngster had anticlimatically run out of gas. He had built up a lead of better than two miles over his closest contestant but he figured that now he

(*Continued on Page* 32)

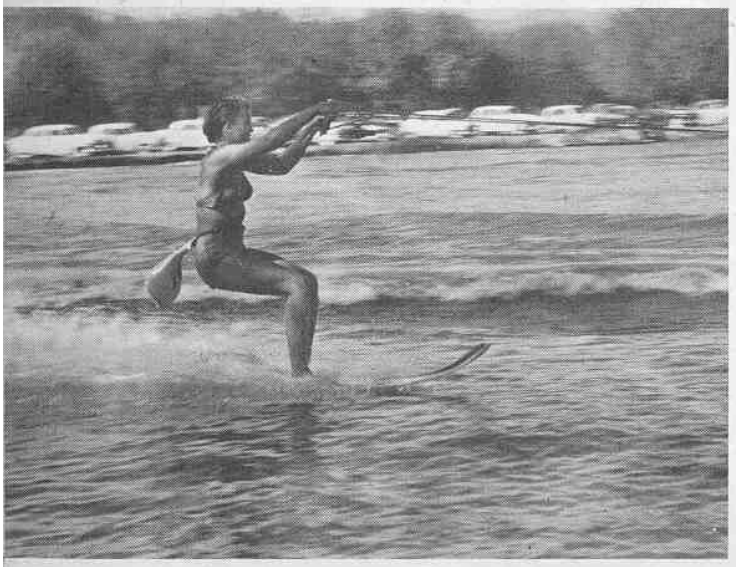
Pete Kotlar tells Jean Corbett about the equipment that is needed to learn to water ski: water, a boat, 75 feet of ¼-inch tow-line, skis, and (a must for learners) water wings, or life jacket or belt.



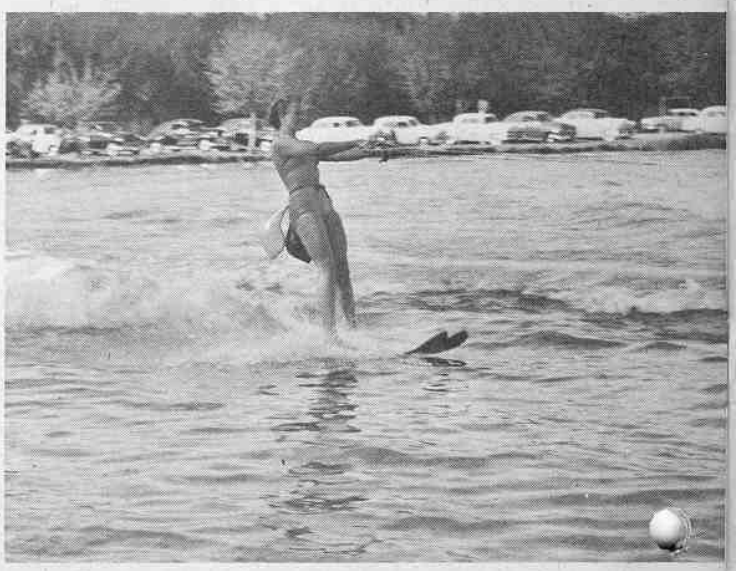
Dry land practice comes first, in same position as assumed in the water. Skis should be rather close together; arms straight; knees tight against chest. Double-handled line is best for the beginner.

HOW TO WATER SKI IN 8 EASY PHOTOS

By Robert Snowdy with text by Paul Vandervoort II

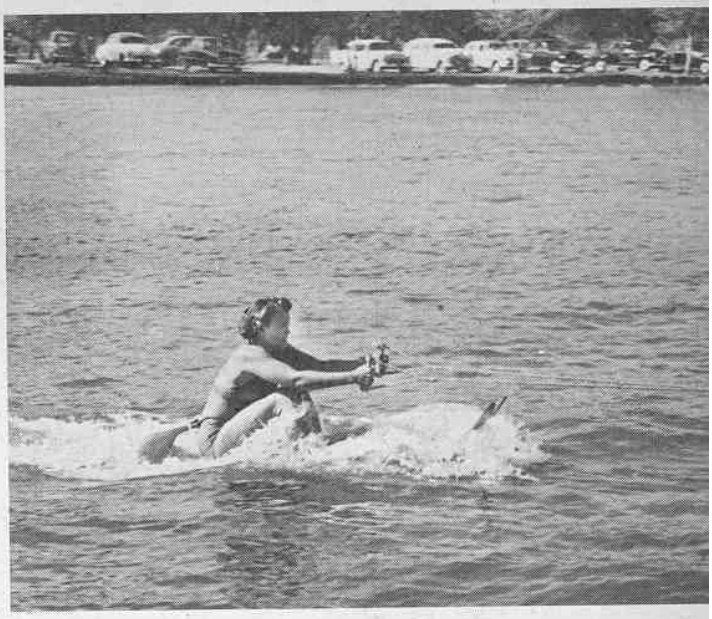


The second point of the take-off is the crouching position after planing has begun. The tow-line helps skier rise as the boat now accelerates to around 20 mph. This is a good speed at which to learn.



Balance is achieved in the crouching position; skier then slowly straightens up until knees are only slightly bent. Back is straight and body leans backward a bit. Sudden movements should be avoided.

Instructor simulates pull of boat, bringing student to a crouching position. After doing this several times, student learns the feel of boat's pull and gets practice in balancing during the take-off.



After seeing that bindings fit snugly, student enters about 3 feet of water and sits on skis, with tips above the surface. Boat starts slowly; gradually speeds up, with skier planing at about 15 mph.

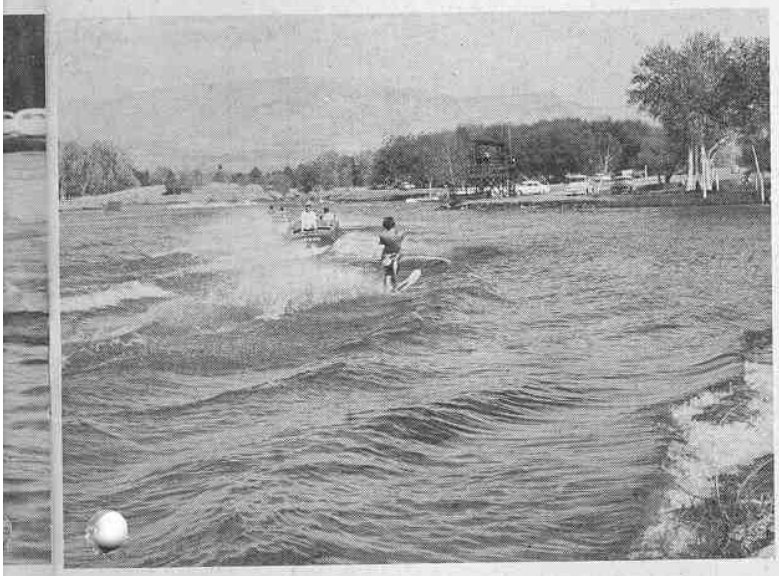
PUT ON a record of "Over The Waves" and let's go for a water ski lesson with Pete Kotlar, Commodore of the Southern California Water Ski Club, "the club of champions."

Water skiing is exhilirating fun for men, women and children, and anybody can learn with expert instruction. Pete Kotlar, who supervised these lessons, is indeed an expert, having been a water skier for many years. His first skiing was done on skis he built himself.

The club which he skippers was organized for "the advancement of safety and skill in water skiing." It presents the largest trophy awarded for water ski events, the "Ed Stanley Trophy," given in the name of a former water ski champion who is a polio victim.

Activities of the Southern California Water Ski Club are devoted exclusively to trick water skiing and trick slalom races. The photos presented here are designed to show how a beginner is taught the principles of water skiing.

Vivacious Jean Corbett, dancer, model, movie starlet, and a member of the SCWSC, graciously consented to assume the beginner's role in these exclusive BOAT SPORT photos. Miss Corbett is one of the Chesterfield twins, and has been in movies and on TV. (End)



Skier should follow in the wake on first few trips, making gradual turns by leaning slightly in direction of turn. An observer in the boat should watch at all times. Landings are made by dropping line.

Speed is lost quite quickly and skis sink to stop forward motion, but the beginner should make first landings far enough from shore to avoid grounding. Here Jean reaches for robe after a first run.

(Above) A Class D Runabout finishes fast in the down-river heat of the coiling, twisting Sammamish Slough event that covers 27 miles.

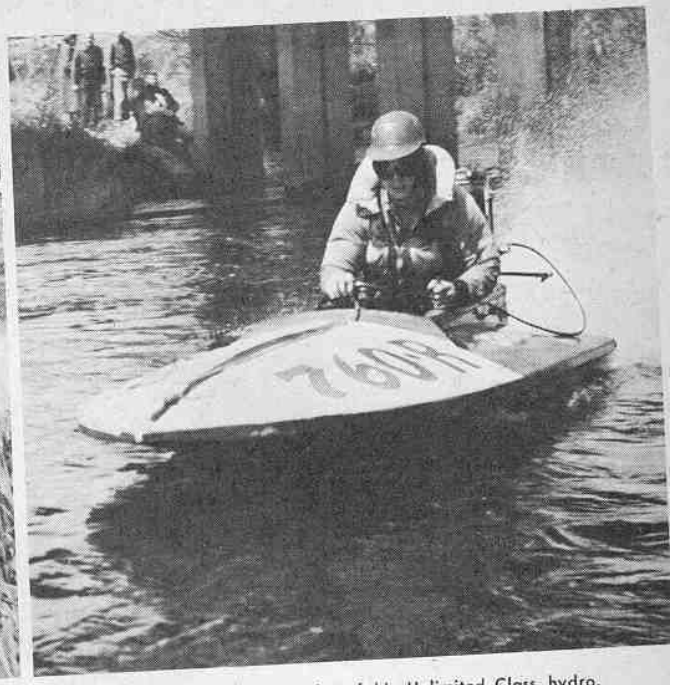
(Above) Bill Farr won Unlimited down-river heat and 2nd over-all.

(Below) Donnie Benson, 12, got 2nd in A despite a barrel roll.

SAMMAMISH SLOUGH RACE

TEXT AND PHOTOS BY
GARY G. JENTOFT

(Above) It was a day of hard luck for Harold Tolford, running in Class D Runabout. He flipped at Bothel and again at Redmond and was towed in.



(Above) Dick Brunes at the helm of his Unlimited Class hydro. Art Sullivan was the eventual over-all winner of this class.

(Above) 13-year old Billy Schumaker pilots his Class A Runabout to final victory.

(Below) Bob Batie, left, re-enters race after hitting Bothell bridge shown here.

ONCE AGAIN racing fans and boating enthusiasts were thrilled by the Pacific Northwest spectacle known as "The Sammamish Slough Race," sponsored by the Seattle Outboard Association.

This, the 32nd running, found a field of 51 starters at Ward's Kenmore Resort on Lake Washington. At 11:00 A.M. April 24th, eight classes of hydroplanes began to twist their way over 14½ miles of treacherous water to Gateway Grove on Lake Sammamish, then return via the same serpentine course to the finish line at Bothell, 12½ miles downstream.

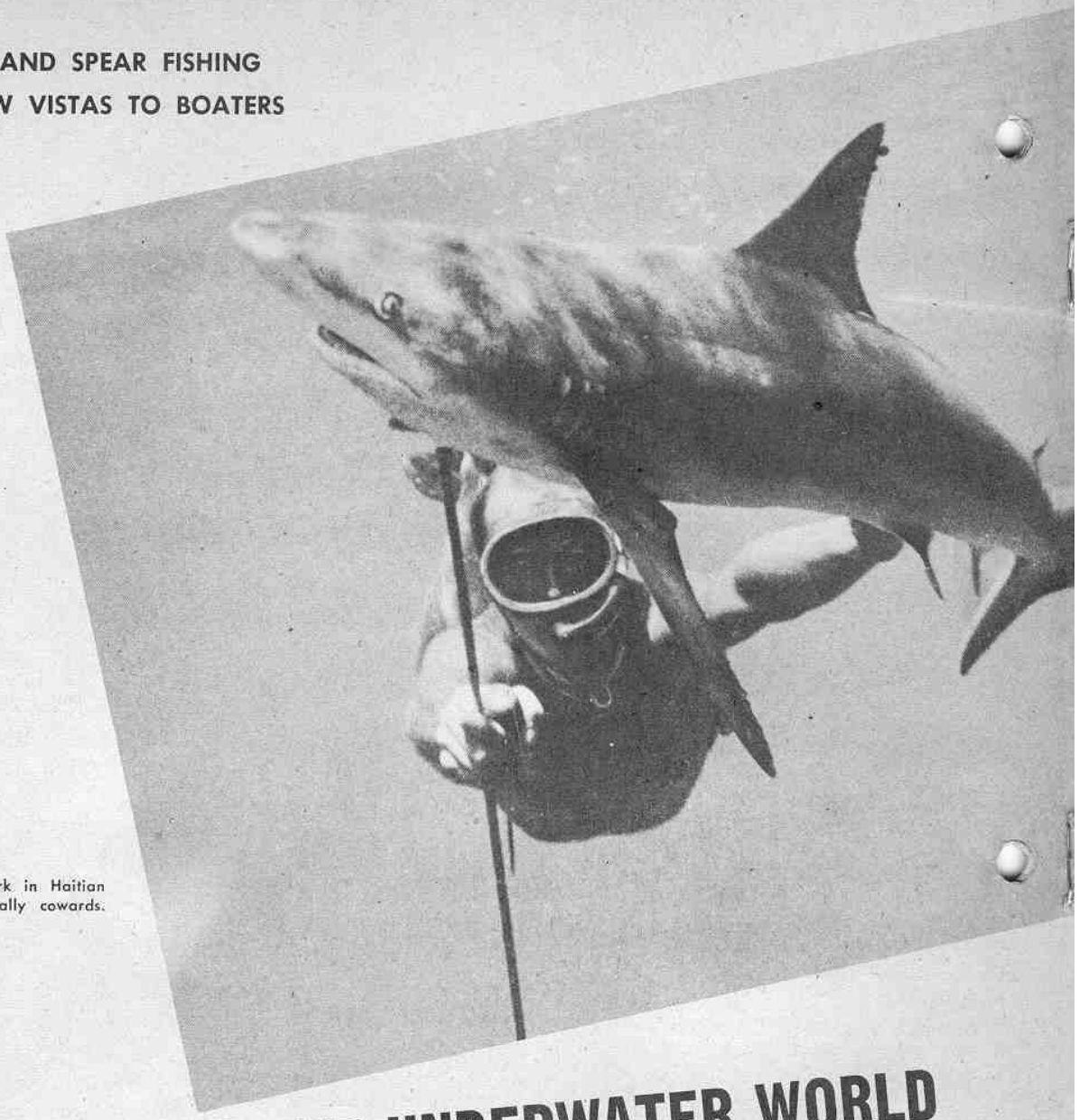
Thousands of spectators lined the riverbank to watch the talented helmsmen maneuver their speeding hydros around the hazardous turns and over a multitude of submerged logs.

As usual, the river took its toll of victims. There were thrills and spills, but fortunately the day went unhampered by injuries. Veteran driver Bob Batie of Seattle collided with the Bothell bridge during his attempt to negotiate the perilous turn over which it passes. He was undaunted by the mishap though, and continued on in competition.

Art Sullivan piloted his unlimited class hydro to a thrilling victory over Bill Farr, the previous winner. Sullivan

(*Continued on Page 30*)

SKIN DIVING AND SPEAR FISHING
OPEN UP NEW VISTAS TO BOATERS



The author spears shark in Haitian waters. Sharks are really cowards.

THE UNDERWATER WORLD

By Gustav Dalla Valle

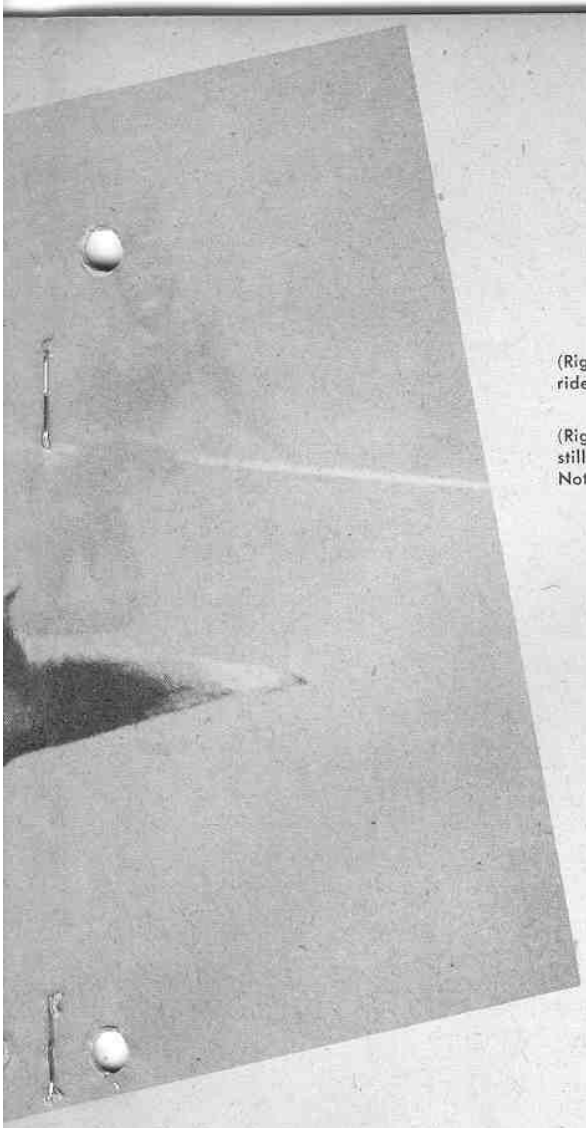
IT HAPPENS that I have spent a lot of time cruising around the Caribbean, and more time skin diving and spear fishing. I have arrived at the conclusion that today a cruiser, traveling in warm and clear waters, is not completely equipped without diving and spear fishing gear. The happy owner of a boat has the best opportunity to enjoy the thrills of this new sport, because he can most comfortably visit and choose the places where the water is clear and the fish abundant. That which before would have been merely an enjoyable cruise, can now be greatly enhanced in exciting interest by skin diving, exploration of the ocean floor, underwater photography and spear fishing.

For underwater exploring, you can choose from simple equipment consisting of mask, snorkel, and fins (excellent quality will amount to only $20) to expensive underwater breathing apparatus, costing up to $300. For a breathing apparatus, one must consider the charging problem. If it is a compressed air type, you must have a compressor on board. There is a small compressor on the market for about $275. An oxygen rebreathing apparatus will need a large bottle of oxygen, which will give you 600 hours. The bottle can be easily recharged at almost every port. Take care in using underwater breathing equipment and follow the instructions exactly. For long cruises it is advisable to take along an additional pair of fins, mask, and snorkel, because equipment can be lost and it is not always possible to replace it immediately. If you are cruising in cool waters, there is a variety of rubber suits obtainable, which permit you to explore an even larger domain.

For photographic equipment there is a large choice of movie and still cameras with underwater cases, ranging in prices from $25 all the way up to $2000. There is such a wealth of detail involved in underwater photography that an article could be devoted to this subject alone.

For spear fishing there is a choice of hand spears, Hawaiian slings, spear guns charged with springs, and those charged with rubber bands. The prices for this equipment range from $6 to $50. It is very important to take a number of additional spears, head points of

(*Continued on Page* 34)



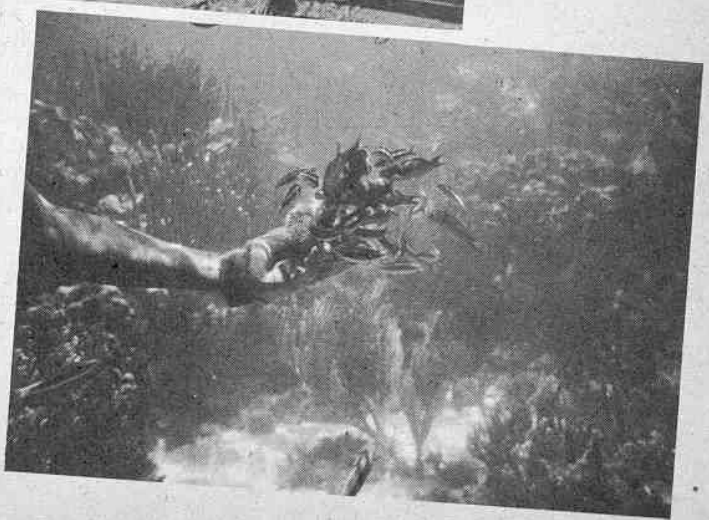
(Right) Skin diver gets free ride aboard a surprised turtle.

(Right) A red snapper which still has pilot fish attached. Note the underwater camera.

(Right) Ed Fisher, holder of the world's underwater endurance record, models complete diving apparatus.

(Below, right) Fish are very curious and unless they are scared by surface splashing will come right up to you. Here tropical fish eat out of a diver's hand.

(Below) This group of skin divers show variety of equipment. The author is the second from the right.



(Top) Self-service launching is offered by Seattle firm. Storage is in warehouse, from which boat is pushed on dolly. (Center) Concrete launching ramp at Fish Springs resort on the Salton Sea in California. (Bottom) This boat basin and launching ramp was constructed by the city of St. Joseph, Michigan, at a cost of only $1,900.

BREAKING THE BOTTLENECKS OF BOATING

By Ed Spanke

Outboard Boating Club of America

Part IV—Launching Ramps and Marinas.

THE BOTTLENECKS of boating, as detailed in previous articles in this series, are these of getting boats *to* and *into* the water. Boaters, notoriously ingenius, are neatly solving the problem of getting their craft *to* the water by means of boat trailers and auto-top boat carriers. They are demonstrating equal ingenuity in getting their boats *into* the water—as will be shown in this, the last of the Bottleneck-Breaking series.

Take the idea launched by the Reverend and Mrs. Wallace C. Pomplum of Minneapolis as an example of what's going on nowadays in the matter of breaking the bottlenecks of boating.

While cruising around on the St. Croix and Mississippi Rivers in their 14-foot outboard during the summer of 1952, the Reverend and Mrs. Pomplun noticed that a number of other Twin City residents were sharing their enjoyment of fun afloat.

From that observation came meetings held for the purpose of organizing a boating club, and the 10,000 Lakes Family Boating Club began operation the following Spring. There were 21 members and the Reverend Mr. Pomplun was named the first Commodore. Within a short time, the club had reached its self-assigned goal of 100 members. (Present membership, including auxiliary clubs affiliated with the 10,000 Lakes group is over 1,000.)

One of the first concerns of the club

(*Continued on Page* 32)

TORQUE TALK

By LOU EPPEL

BEING IN the happy position of having been associated, in one way or another, with the sport of powerboat racing for a little over twenty-five years, and being a saver of clippings related to the sport during this period, we have been able to collect quite a reference file which discloses many interesting facts.

What with all the current feeling being generated by just one or two of the full blown racing outboard enthusiasts regarding their division of the sport, we thought it might be interesting to the alcohol burning circles to bring back to mind such drivers as Doug Fonda, Freddie Jacoby, Jr., Paul Sawyer, Art Wullschleger, Ken MacKenzie, Jimmie Mullen, Jackie Maypole, Paul Wearly, Frank Vincent, Dick Neal, Tommy Tyson, Clint Ferguson, Sammy Crooks, Joel Thorne, Tommy Ingals, Frank Desmond, Alex Deemer, Don Frazier, Worth Boggeman, Ruth Herring, Harper Chance, Gar Wood, Jr., Marshall Eldredge, H. G. Ferguson, C. Mulford Scull, Lew Franco and many, many others.

Probably the most salient factor brought out while reading the clippings is the fact that there were so many good drivers grabbing the headlines, week after week. True, a few of those listed and some others grabbed more firsts than the rest but, by and large, outboard racing news and headlines were not dominated week after week by the same three or four names as now seems to be the pattern.

Whenever one reads the results of this or that regatta, it is a reasonably safe bet that the names of Bill Tenney, Bud Wiget, Doug Creech, Dave Livingston and perhaps three or four others will not only dominate the list of prize winners, but will also dominate the entire text.

One evening, not too long ago, a group of former outboard jockies foregathered over a few steins of root-beer, and the conversation got around to the current trend toward the downright domination of this great sport by so very few and the complete absence of other "names" in the outboard racing ranks. It is not for this department to try to come up with the answer, but it does seem strange that so few should be so good, and so many should be so far back in the running that they have become lost in the spray of anonymity. Perhaps if more time were spent by the staunch defenders of the racing outboard contingent in doing something for the rest of the large and unpubicized drivers in their ranks, rather than throwing rocks and curves at the thousands of hot competitors in the stock outboard ranks, they might well benefit to a far greater degree.

* * *

We don't remember where we read it, but recently one of the boat racing scribes stated that the International Grand Prix event held in Miami was first won by Mario Verga of Italy in 1954. Seems to us that the first winner of the International Grand Prix was Frank Foulke of Essex, Maryland, in 1953, the first year it was held.

* * *

What to do about the proposed Class D Racing Runabouts has become a major tempest in an oversized tea-cup. If nothing else, the pros and cons have stimulated the sale of carbon paper and onionskin paper, what with all of the letters, copies, etc., shuttling back and forth across the country to all interested members of the A.P.B.A.'s Outboard Racing Commission and the Stock Outboard Racing Commission. Seems that the group who is anxious to run Mercury D motors with open exhausts on Racing Runabout hulls has suddenly become an orphan in the storm of verbiage. We have tried to look at both sides of the argument with complete impartiality and come up with our decision; however, there are so many factors which have not been brought forth in the thousands of words bandied about, that we find it somewhat difficult. First of all, from observations made up and down the East Coast, there certainly is need for a runabout class which would bring out more than three or four entries, and which also would have better than fifty per cent of the starters finish. Since the days of Charlie Mack and his flashing F Racing Runabout, the runabouts, both C Service and C Racing have been far from impressive in numbers and in speed. Perhaps a good field of racing runabouts would add considerably to racing outboard programs, and if the use of D motors will accomplish this, all to the good.

One cry that we have heard from several members of the racing outboard contingent is that the proposed class, running stock motors with only open exhausts, should be under the jurisdiction of the Stock Outboard Racing Commission. Perhaps they should be, but where would they race? There are many, many places (Connecticut for instance) where running without mufflers is absolutely *verboten*. One of the major reasons for the nationwide success of the stock outboard classes is the fact that the comparative lack of noise permits their being run in competition, or for testing, or for any reason on any river, lake or bay, without having the town fathers up in arms about disturbing the peace. If the proposed class is put under the S.O.R.C., the possibility of scheduling them in a stock outboard program is quite unlikely, as local conditions and local authorities just would not permit it. The problem of approving sanctions then would also be another point, as two commissions would be involved. There are many more facets to the situation, but we feel the core of it lies in just where and when this new class can be raced. It is our feeling that the open exhaust is the prime factor, and the factor which causes the largest single problem. If the class is to race with the back doors open, then they should come under the Outboard Racing Commission. If they decide to close the doors and run stock all the way on racing runabout hulls, then they should be under the jurisdiction of the Stock Outboard Racing Commission.

The caterwauling about too many classes already is to us just so much stuff. Have you ever checked into the number of classes of one-design sailboats? It'll scare you if you do. The power boat boys are pikers by comparison. Local enthusiasm will be the deciding vote always as to what classes are raced, and if any class potentially can put on a good show and offer top notch competition and thrills, any committee will welcome them on the program. Regardless of which commission they will eventually come under, let's let the class stand on its own.

Three years ago, a militant group of inboarders sounded off about the then proposed 136 Hydro Class, citing many of the same arguments being put forth by some of the outboarders. The cry about there being too many classes already was echoed and re-echoed, and an early demise was predicted. A fast check of the registrations for 1954 shows that the three most popular classes in inboard racing were the 48 hydros, the 135 hydros and the 136 hydros, each with 122 registrations. The 136's certainly were able to stand on their own; and that's why we think that any proposed class should have the same opportunity, and not be shouted down and left to die in committee. (End)

BOATING BOOKSHELF

POWER BOATING

OF PARTICULAR INTEREST to inboarders, with some instructions for outboarders, is "Power Boating" by Geoffrey Smith, recently published by Wilfred Funk, Inc., 153 East 24th St., New York 10, N. Y. at $4.00. Written primarily for the new powerboat owner, this book covers all the basic techniques from dropping a mooring to reading a chart. It is told in a series of photographs accompanied by descriptive captions which are short and explicit.

The chapters deal with fueling; towing and handling a dinghy; rules of the road and fog signals in coastal waters, the Great Lakes and Western rivers; and many other problems that confront a powerboat man. The photos are by John Keller and the author.

Geoffrey Smith is Founding Commodore of the Storm Trysail Club, a world traveler, deep-water sailor, ocean racer and the director of the Texaco Waterways Service, a cruising-information bureau. The inspiration for his book came from years of answering boating questions. John Keller is a commercial photographer with a special interest and experience in the power-cruising field.

THE BOATMAN'S ALMANAC

Here's a book by my old friend Herbert Crooker, with a preface by Jimmie Durante, for boatmen to read in the spring, fall and winter, and to take on a summer cruise or in any other season in which you cruise. It's a salty book, full of salty information and salty humor. You'll find that it's a good boatman's manual and a handy reference volume.

"The Boatman's Almanac" is published by Hermitage House, Inc., 8 West 13th St., New York 11, N. Y. at $3.75. If you're thinking of buying a new or a used boat, look up the survey of the boat market that leads off Herb's book. What about weather? This volume will help you get weather-wise. Interspersed with items on boat upkeep and handling are breezy accounts of the "U.S. Coast Guard" and other topics, including an interesting section about historic lighthouses. There's all sorts of material stowed away in this book: U.S. Government regulations, buoyage system, rules of the road, storm signals, etc.—even a collection of sea chanteys!

Herbert Crooker is an ex-Navy man where as he says, "he had a free sail." He's now a New Yorker and cruises up and down the Atlantic Coast. When on land, he is Eastern publicity director for Metro-Goldwyn-Mayer.

H. H.

Around the Buoys

(*Continued from Page 2*)

On the second day of the conference Marion Lepich of the American Red Cross conducted a dry land boat safety demonstration; Guy Hughes, Executive Director, Outboard Boating Club of America explained the O.B.C. Model Boating Law; and Richard Langford of the American Red Cross conducted a discussion, "Prevent Drowning and Boat Accidents through Joint Action."

The Water Safety Congress with national headquarters at 122 North Main Street, Somerset, Ky., is aggressively expanding its membership in an effort to save lives through the promotion of water safety among the public using the Inland Waterways of the United States.

Outboard racing's biggest problem for officials, that of spotting clock jumpers at the start, may well become just an unhappy memory. Harry Cupp, Oak Ridge, Tenn., engineer and N.O.A. race official, along with the Polaroid Corp. of Cambridge, Mass., have devised a camera mechanism that can be synchronized with any starting clock and is designed to take the guess work and arguments out of starts.

The Polaroid Land Camera device takes a picture as the starting clock hand hits the 60 second mark and produces a print within a minute's time. The camera, which is equipped with a fine Wollensack lens and shoots at speeds up to 1/400th of a second, was first used by the N.O.A. at its belated Division IV World Championships at Corpus Christi, Tex., in late March this year. Though weather conditions were not wholly suited to photography at the blustery event, the camera recorded boat numbers in all starts. Drivers who fell victim to the sharp eye of the camera could only say, "That's it. If the picture shows I was over I guess I don't have any argument."

The new official "false-start eye" will be used by N.O.A. at all future sanctioned events. Though the idea of photographing starts has been kicked around for some time with no one heretofore coming up with a well-designed device, now that one has been perfected all sponsoring groups should give thought to use of this argument-settling gimmick. It is certain to save officials from the barrage of irate denials of gun jumping inevitably directed at them at regattas by drivers tossed out for over-eager starting line approaches. Good officials are hard to come by so let's see that they get this new tool that will make their thankless job a bit more pleasant.

* * *

Devil's Lake, about 60 miles west of Salem, Ore., reputed among motor boat drivers to be "fast water" with a total of seven outboard and six stock outboard records credited to it in the APBA records at the end of the 1954 season, has been selected as the site for the seventh annual Stock Outboard National Championship regatta of the American Power Boat Association.

Closed course events will be held on Saturday and Sunday, Aug. 27 and 28, and mile trials on August 29, for all classes of stock outboards. The three-day meet will be staged under the auspices of the Devil's Lake Yacht Club and the Oregon Motor Boat Racing Association.

Previous Stock Outboard national title events have been held in: Lake Alfred, Fla., 1949; Dallas, Tex., 1950; Knoxville, Tenn., 1951; Oakland, Cal., 1952; Liverpool, N. Y., 1953 and DePere, Wisc., last year.

On September 11th will be held the first running of the Manhattan Island Marathon, a stock outboard event that will go twice around the island for a distance of 57 miles, starting and finishing at the sponsoring Val-Ray Boat Club, 196th St. and the Harlem River (on the Manhattan side).

Classes will be: AU, BU and DU; and C, E and F modified; plus the new "36" class. Applications for entries should be sent to the Inwood Outboard Racing Association, 242 Dyckman St., New York, N. Y., under whose auspices the event is being held.

This event, with Wm. Rood, Race Chairman, Michael Ronca, Referee, Guy Lombardo, Starter, Charlie Strang and Johnnie Coates, Inspectors, was planned as an answer to many requests for a race to take the place of the Albany-New York Marathon of other years. It should be a most interesting affair from the standpoint of both drivers and spectators. It is hoped that national television coverage can be arranged from different points on Manhattan's waterfront.

Though it may seem incongruous, one of the country's most active outboard racing centers is in land-locked Arizona where the Arizona Navy has its fleet headquarters at 1645 East Turney in Phoenix. Gina Mishey, Secretary of the Arizona Navy, reports a successful season opener on April 17 at the first annual Phoenix Boys Club Boat Race on Lower Lake Pleasant, Phoenix.

California drivers romped home with the bulk of the $50 per heat prize money and trophies. Boots Kaye Morphy and Craig Spencer of Hollywood and Los Angeles respectively split heats in Class M Hydro events, with Boots making the faster time and taking home the class trophy. Tommy Ingalls, Bakersfield, Calif., copped both heats of C Hydro and then duplicated his performance in B Hydros. Kenny Hodges, Blythe, Calif., won the ASH event with Deanie Montgomery, Corsi-

cana, Tex., taking both heats in BSH. The A Hydro trophy went to Glen Claymon, Ontario, Calif., who parleyed a win and a third place into top points. Roy Gates, Ventura, Calif, won C Service Hydro with straight heat wins while his brother Leonard Gates took both heats of C Service Runabout. Lewis Morphy, Hollywood, was pushed hard in both heats of C Racing Runabout by Leonard Gates but Morphy took the event, won the first heat of F Racing Runabout but lost out on the trophy to Ralph Homes, of Phoenix, who put together a second place and a first place heat win to dominate the class.

Mrs. Mishey singles out Guy Tillman of Phoenix as a newcomer who holds considerable promise. Tillman really herded his D Stock Hydro around the course in both heats to take the top honors in the class.

Tommy Ingalls moved back into competition again in Class F Hydros for a double take, with Ralph Homes and Guy Tillman splitting second spots. Chuck Van Dyke of Yuma, Ariz., divided heat wins for BU Runabouts with Deanie Montgomery but the Texan lost out on the trophy by 3/10 of a second.

The Arizona Navy sponsored the event which was sanctioned by the N.O.A. Mrs. Mishey in reporting on the regatta stated, "There is water in the desert. We have it and we are doing with it what we think best. We are holding outboard races on it—and come you-know-what or high water, we're going to have plenty more races in Arizona this season."

H.W.B.

How Factory Tests Improve Your Motor

(*Continued from Page* 6)

Joe was formerly a garage mechanic, later specialized in setting up racing car engines and then moved into boat racing until his job with a manufacturer ruled him out of organized competition. He's as much at home in a boat as a traveling salesman would be in a car. Joe spends at least one hour each day, seven days a week, testing boats and more frequently than not, puts in as much as nine hours at an outboard helm.

Joe's regular crew includes seven test drivers. Several of the drivers have a talent for mechanics and give Joe a lift tearing down, repairing and re-assembling motors.

Jim Wynne is given an engineering lift during the busier winter months, when the Oshkosh waters are frozen solid, by several of the factory engineers. Specialized personnel are brought in on a transient basis. While I was there, a factory propeller expert was testing various propeller designs on a new model motor for 1956 release. An ignition expert was conducting specialized tests on a new magneto design and a fuel and carburetion engineer was running through a series of experiments and endurance tests on a new model fuel pump.

In general the underway testing is done according to a definite plan. While it may seem glamorous to be around outboarding every day, it takes a peculiar breed of individual to be a test driver. The test drivers' hours are 7:30 a.m. to 6 p.m., *seven* days a week. The drivers are young unmarried men in their late teens or early twenties, but, to a man, they've been around boats and boating for years. Some of them gained their background in skillful motor handling in stock racing circles, others as members of charter boat families.

At least four of these drivers are continually engaged in endurance testing. Under the endurance test set-up, motors are run eight hours a day, day after day until something breaks. The breakage is repaired, or the broken part is replaced, and the motors are returned to the endurance circuit and run up to 500 hours. Since it has been determined that the average outboarder puts about 25 hours a season of actual running time on his motor, the 500-hour endurance test is the equivalent of 20 years of normal operation! At least, that is, if you can consider normal operation to be that of giving the motors a bare minimum of maintenance, far less frequent lubrication of lower units than any manufacturer would recommend and wide open throttle-running for the majority of the time.

The endurance test drivers follow a set pattern. They are briefed each day by the engineers as to what particular troubles and idiosyncracies they should be on the alert for. Then with their boats loaded with ballast weights to simulate the equivalent of two added passengers, each driver heads down the Inland Waterway to Venice, out into the Gulf of Mexico (if weather permits—and the weather has to be pretty rough to keep the test crew off the Gulf), up the Gulf to Midnight Pass, in Midnight Pass and back to the boat house for a quick stop. Here the driver logs in, checks to learn if any rush test requests have come in from the factory that temporarily will pull him off endurance, gives a routine report and moves out again to the Inland Waterway, this time heading north to Sarasota, out New Pass at Sarasota to the Gulf and back to Midnight Pass. The round trip is forty miles—a long way in a small outboard. How many laps a day a driver makes around the circuit depends on the horsepower of the motor and the size and weight of the boat being tested. Though the test drivers would enjoy company on their rounds, for a seven-day working week of this type of activity is a pretty lonely job, the drivers are required to ride alone so that they can pay full attention to their motors' performance. Occasionally one of the engineers will

(*Continued on Next Page*)

How Factory Tests Improve Your Motor

(*Continued from Preceding Page*)

ride the circuit with a test driver since it's been found that the drivers may get used to gradually developed unusual noises and fail to make a note of them.

Four or five boats run the endurance pattern most of the time. Since the same course is followed by all boats during the endurance check, derelicts are spotted, reported to the boat house at the end of a run so a rescue and repair crew can go to that driver's aid.

On the days during which I was visiting the facility, everything ran smoothly with the five endurance tests at that time underway. Joe Anderson, however, stated that sometimes things get pretty hectic. The factory, of course, is always anxious to push endurance tests through to completion in order to get reports and inspect the engines. Invariably, when the factory engineers begin to clamor for reports (which is usually toward the end of the 500-hours check), troubles begin and flawlessly operating motors break down at remote points. Joe and the rest of the crew go crazy towing in, tearing down and rebuilding motors at a frenzied pace to get the equipment out on the test logging hours again.

At the end of every day, each driver fills out a complete log on his day's observations. This also includes special reports on parts under particular surveillance. It's a grinding, tedious job —and it goes on and on even when small craft warnings are up, and it seldom stops short of a hurricane. Endurance testing is designed to find out just how long the manufacturer's model will hold up under constant high speed operation, and to determine if any parts are incapable of serving a full 500 hours.

Inactivity is another foe of the outboard motor, so exposure and weather tests are also routine. These are designed to simulate conditions encountered by motors owned and operated by persons who are strictly weekend outboarders and who let their motors sit unprotected the rest of the week. Each motor undergoing an exposure periodic-operation test has a painted code of the day of the week it is to be run. On that day only, the motor is started up and run a prescribed number of hours. The motors undergoing the exposure or weather tests are left completely uncovered in the open, subject to salt water, sun and wind for as much as a year without a clean-up, adjustment or lubrication. The endurance test, of course, doesn't allow a motor to freeze up through internal rusting or corrosion since it is being used daily. But if the motor is ever going to freeze and rust up from idleness, it's bound to do so under the rugged exposure or weather tests. Paint finishes are studied, too, since constant exposure to sun and salt water is the greatest enemy of a paint job. A motor finish may look wonderful on the show room floor, but if the paint components, prespray preparation and painting technique aren't correct, that flashy paint finish fades, peels or blisters in a few weeks or a month's time if the motor is left uncovered in the open.

Endurance and exposure checks are routine, but many special tests are also conducted. For example, it has been found that there is a tremendous difference in the quality of gasoline used by outboarders in varying sections of the country. The factory ships in large sample lots of gasoline from various marine and filling stations in all parts of the country. Another batch of various models of motors undergo specific tests with these sample gasolines. It was found, for example, that gasoline purchased in the Sarasota area could be used for 100 hours without a change of spark plug being necessary. Gasoline imported from other sections, in some instances, would foul plugs in 20 hours or less, while certain other fuels offered an even longer operating span without plug change than the local products.

In specifying spark plugs or spark plug gap settings for certain models of motors, the manufacturer must take into consideration operation with the poorest possible fuel marketed in any area. Based on this fuel test, dealers may be alerted to peculiar conditions existing in their areas, and recommend plugs and gap settings to offset, or partially offset, fuel deficiencies. Results of such tests are also relayed to the spark plug manufacturers, who are vitally interested in improving their products.

The Proving Grounds devises and conducts tests, but the requests for tests are initiated by factory engineers, the sales department and independent boat and accessories manufacturers. A newly designed part, an untried metal formula or a new casting method which may check out well in theory in the factory laboratory, is not approved for any model of a motor until it has undergone exhaustive underway, Proving Ground tests. Once every component in a prototype model has been wholly proved and put into production, it is given an acceptance tank-run at the factory for a minimum of a half hour.

Still as another phase of the Proving Ground's work, one out of every 100 motors given the production line acceptance is selected at random by the Chief Engineer and shipped to the Proving Grounds for a minimum of five to a maximum of ten hours of spot-bench and underway checking. This extra check of an accepted model has been devised largely to prevent any errors on the part of the production line employees and inspectors. Each motor carries tags identifying the inspector or inspectors who have passed on the various parts. The Proving Grounds gives a detailed report on each of these motors, and an adverse report reflects unfavorably on the inspector who passed the motor.

Little things, such as paint appearance, scrapes, tool marks, improperly tightened bolts, and faulty carburetor adjustments, are all reported upon. Failure of parts isn't expected, since physical weaknesses should already have been caught and corrected as a result of endurance tests.

In checking over a sample report on a spot-check motor, I saw that Wynne's crew had noted that the choke shutter struck the magneto when retarded. They had also noted paint bubbles on the finish of the lower unit. These are things that no customer would be likely to spot and minor flaws that would not cause a customer any undue difficulty, but the Proving Grounds test crew are more finicky than the consumer. For example, they would reject as unsuited a motor which idled at an overly high rpm in neutral. Naturally, such spot checking keeps the factory inspectors on their toes, and the same emphasis on selectivity and care is passed on by the inspectors to their assembly crews. In this way, quality of assembly can be maintained at a high level.

What happens to the 500-hour motors or the spot-check motors which are not passed by the Proving Grounds? The 500-hour motors are sent back to the factory engineers for a complete inspection and then scrapped. On the basis of this inspection, a prediction of the life of the parts and major weak points of the motor will be determined. Any persistently weak part, of course, must be re-engineered. The rejected spot-check motors will in most instances not need to be scrapped, but, rather, any defective part or parts can be replaced or defective workmanship remedied.

I asked to look over some typical sample test requests. To the layman, taken individually, these requests might seem unimportant, but no motor is more reliable than its weakest point and each test request was designed to eliminate these weak links from any assembly. These are sample requests:

Engineering request: Test saddles with swivel pin cast hole cut down .010" in size to eliminate side play in steering. This size is now being run for future production.

Question: Is this better than the present production hole size?

Engineering request: Check cylinder blocks with .002" oversize bores. Run on endurance and report weekly any information obtained from tests on idling improvement, noise level, top speed or any tendency toward cylinder wall or piston scoring.

Engineering request: Choke shutter redesigned to give more complete shut-off.

Information required: Does this help on cold starts? Does increased travel of shutter require redesign of the shutter return spring?

Minimum hours desired on this test, 300.

Certain items cannot be adequately tested in tanks but must be proved out by underway testing and observation. Spray shields or anti-cavitation plate design on lower units must be tested and observed underway. Electrical installations are subjected to totally different vibrations in underway tests as contrasted to tank tests. Reports from the Proving Grounds may indicate that a different manner is required for securing ignition wiring. A report may indicate the need for a change in insulation or a redesigned protective shrouding.

During the testing of the Mercury Mark 25, before it was released, engineers encountered fuel leaning-out trouble. In order to determine just what was causing this problem, it seemed necessary to be able to see as well as pressure-gauge the fuel flow. The Proving Grounds devised a plexiglass insert window for the Mark 25 carburetor so that they could visually study the fuel and float levels. They also installed clear plastic fuel lines so that they could observe the passage of the fuel with the motor in operation under load and check for any foam, emulsifying of fuel or air bubbles passing through the fuel line between the pump and the carburetor or the pump and the remote fuel tank. Underway operation was called for. Engine performance was not the same in a test tank since the propeller or test wheel cavitated in a tank and failed to simulate load conditions. Various needle valves, filters, float levels and inlet valve seats were tested until the proper combination was arrived at to cure this fault.

Many outboard manufacturers purchase certain of their engine's components from independent vendors. These parts are designed to the manufacturers' specifications. But, these too must be given 100% proving to be sure they meet the specifications as outlined, and, conversely, that any manufacturer's specifications were proper for the job required of the part.

Manufacturers' accessories, such as remote shift controls, throttles, steering wheels and fuel tanks must also be checked. For example, when a new remote fuel tank was designed, a test request desired durability information concerning the welds of the baffle plates and the ruggedness of the bottom seams in the tanks. For this check, the remote tanks would not be secured in an approved fashion but allowed to bounce around in the bottom of the boat under rough water conditions in an attempt to break the tank apart.

The sales department also gets into the act. Frequently they send boat accessories fabricated and marketed by other manufacturers, with a request that the items be thoroughly checked out to determine whether or not they should be recommended for sale by the manufacturer's dealers. The reputable marine dealer carries only products he can recommend, for a faulty accessory can queer a sale of a major item.

Boat manufacturers' products are also given a thoroughgoing study. Frequently, on the basis of reports made by the test crew, boat manufacturers will add stress to certain parts of their hulls, redesign contouring, relocate seats, or make other recommended design changes based on lengthy and hard use of these hulls in endurance runs.

Certain specific components are sent for analysis. A new quick-replacement magneto for the Mark 55 was being given a checkover while I was present. Samples of these magnetos were run in motors for four hours at 6000 rpm, then torn down, inspected and lubricated. If any malfunctioning had occurred, necessary repairs were made and they were given an additional seven-hour test. They were reassembled after a second inspection, spot checked again for a half hour and if the voltage output proved to be okay, they were then to be approved for installation on motors. Once the samples had been adequately proved, later factory production practice called for a seven-hour, high-rpm factory test for every magneto, since it is the aim to have this Mark 55 magneto stand up for a minimum of 500 hours' use.

All endurance tests on motors, however, are not conducted at high speed. One slow speed endurance check was being given to water pump impellers and water seals. The motor used for this check was idled for hours on end in shallow water with a shell and sand bottom. The object, of course, in keeping with the endurance philosophy of the Proving Grounds, was to find out just how long the components being tested would stand up to the abrasive action of chewed-up sea shell and the cutting effect of sand. On the findings of this test, it might be necessary to install a different material for use in the water seals or impellers, or perhaps a different design, for it is certainly within the realm of possibility that a fisherman may spend much of his boating time idling over similar hazards.

While much of the testing was of a routine and undramatic nature, I was fortunate to be present during the time that a new motor-mounting system was being checked out. Wynne called this the Rubber Tire Test. It was plenty rugged, yet fairly simply devised. Four ordinary automobile tires, with their side walls drilled (so they wouldn't float) were lashed together. These tires were fastened midway on a length of stout cable, secured at one end to a dock cleat and at the other to an outboard powered boat. The test was a fiendish one. The tires were submerged so that the tops barely showed several inches below the water's surface. A test boat, with a motor equipped with the new mounting system was then run at wide-open throttle at these tires. In hurdling the obstacle, the motor was kicked up, in order for the lower unit to clear the tires, and then allowed to slam back into normal operating position. A specially reinforced boat made of molded plywood, with a fiberglass

(Continued on Next Page)

Classified Advertising

Use this directory for prompt response. Rate 20c per word ($3.00 minimum). CASH WITH ORDER. 5% discount for three or more insertions to direct advertiser. Copy should be on one side of the sheet and typewritten, if possible. Schedule of closing dates for classified advertising as follows:

Issue	*Closing Date*	*Issue*	*Closing Date*
March	Nov. 1	July	Mar. 20
April	Dec. 20	August	Apr. 20
May	Jan. 20	September	May 20
June	Feb. 20	December	Aug. 20

Make remittance payable to BOAT SPORT, Classified Advertising Dept., 215 Fourth Ave., New York 3, N. Y.

FOR SALE

FOR SALE—Used and rebuilt marine motors, 2 to 550 H.P. gasoline and diesel. Complete stock list of popular models. Write for FREE Catalog 190 covering conversion equipment, propellors, reverse gears, fittings, and supplies of all kinds. STOKES MARINE SUPPLY, Dept. BS, Coldwater, Mich.

CONVERSIONS for all model Ford, Mercury, Lincoln and Jeep Engines. Free Catalog. Lehman Manufacturing Company, Dept. K, 972 Broad Street, Newark 2, N. J.

MERCURY MODIFICATIONS—Cylinders padded —A-B-D, pistons built up. Alcohol conversions on carburetors. Gravity tanks for 20-H. Electronic balancing. Full house jobs for racing. Write O. F. Christner, Quincy Welding Works, 5th and State, Quincy, Illinois.

BARGAINS galore, marine hardware items. Factory imperfects, overrun bargains. Free folder. Marine, 3604 Stevens So., Minneapolis 9, Minnesota.

OUTBOARD RACING ACCESSORIES, helmets, speedometers, throttles, steerers, life jackets, fins, racing varnish, racing pistons. Send for list. Fred Jacoby Boat Works, North Bergen, N. J.

NITRO BLITZ ADDITIVE for gas or alkie burners. 10% faster. Absolutely undetectable. Add one 8 oz. can to 1½ gal. of standard mix. No modifications needed. Send $1.50 to Blitz Racing Products, 14085 N. Bayshore Drive, Madeira Beach Florida. No COD's. All orders confidential.

How Factory Tests

(*Continued from Preceding Page*)

bottom, was used for the hurdling boat.

The design was by Dick Cole of Miami and the boat spoke well for Cole's design, for despite the ideal situation of having the boat take none of the shock and letting the unit bear the entire brunt, on occasions, the outboard maintaining the line taut would get slightly out of position, pull the tires a bit above the water's surface and the boat as well as the motor would take the shock.

During the course of that one day, Joe Anderson slammed into the tires 100 times, which was the scheduled maximum for the new mounting system test. Each time Anderson hit the tires, the motor would fly up and slam back into the transom of the boat with sledge-hammer impact.

Amazingly enough, the entire mounting system and lower unit withstood the test without failure. On three occasions Anderson temporarily was forced to interrupt his cowboying antics. The first break occurred when the impact fractured a propeller blade. Twice after that the four steel-filled, braided tie-down cables, arranged to prevent the motor from flying entirely into the boat when the motor kicked up at about 30 mph, were snapped by the impact and had to be replaced. Somewhere about the 70th run, the swivel pin was visibly bent. But after inspecting the steering, it was found that this did not interfere with maneuverability and the tests were continued without changing the pin.

Though the day's work is routine, life is neither grim nor lacking in fun at Midnight Pass. Pelicans abound in the area, sometimes hundreds of them lounging around on the waterway and taking off sluggishly as the test crews approach. One particular pelican has become a pet. The crew have named him Mortimer, and sometimes he will tag along with one of the test boats and lazily flap overhead for miles, seemingly just as much interested in the sound and performance of the motor as the test driver. Of course, Mortimer does this because he's looking for a handout. He has come to depend upon Red Anderson, the Anderson kids and the test crew for his daily sustenance since he gave up foraging for himself. Mortimer's greatest love is tobacco. He sometimes startles strangers on a tour of the grounds by swooping down and filching cigars from their lapel pockets.

While the crews are too busy to give much attention to pets, a brown nondescript, mongrel dog is a Proving Grounds regular. Since he can't talk and distract the test crews, he's a privileged rider and has logged as many hours as most of the veterans during his four years at the Proving Grounds.

What do the test crews do with their time off? You can probably guess. They borrow a boat and go night fishing, or haze newcomers by taking them out at night and losing them in the maze of mangrove tunnels and little arrow channels that wander as endlessly and frustratingly as a mirror maze in an amusement park. Every newcomer gets his share of hazing—sort of an endurance test for the personnel before they go to work to see how well the motors can take it! (End)

What's New on the Racing Scene

(*Continued from Page 9*)

are is impossible to say but apparently some of the Class A drivers have evidenced considerable interest in the motor and plan to buy models if either of the two sanctioning bodies approve it.

Strangely the Class C Konig, which has proved itself in at least one isolated instance to be superior to our own PR 65, has not had spec application made, which indicates strongly that Konig, at least for 1955, would like to hold the hot iron under wraps until he has tested it personally against United States competition.

Recently, at Baldeney See, near Cologne, Germany, Pinand defeated Konig in closed course competition but only after Konig had been thrown out while leading, climbed back into his boat, restarted the motor and overtook eight other competitors to finish a close second. This performance is such a rarity in outboarding that rumors that the Konig C can top 75 (set up for straightaway running) do not seem out of the realm of possibility.

The other excellent performing Northern European C is the Triumph Speed Twin, campaigned by Charles Largefeuille. This is a motorcycle conversion but unlike more commonplace European J.A.P. or F.N. conversions, it winds up with no more vibration than a PR. The J.A.P.s and the F.N.s, while fairly hot, are notorious for their excessive vibration. Largefeuille's conversion is equipped with factory-designed, hotter overhead cam, and dual Amal carburetors. It presently has been running on a mixture of gasoline and benzol, with a 9.5:1 compression ratio. Largefeuille has found that the motor already is the equivalent of the PR 65s running in Europe, and is altering the compression ratio to 1:1 and converting to alcohol. He hopes to meet some United States competition before the year is out.

Noting its popularity in non-sanctioned Region 7 events, A.P.B.A. gave probationary approval for 1955 to the new "36" class, competed in predominantly by Johnson Sea-Horse 25s and Evinrude Big Twins. The new probationary class, which already had a strong nucleus through the Mid-west,

What's New on the Racing Scene

(*Continued from Preceding Page*)

charge of the cooling water (in open exhaust form) at the base of the exhaust deflector. This Mercury cooling method, which has been followed out in the Jones-O'Dea removable head-block version, engineering-wise, would seem to be an improvement over the cooling method used for the SR Class B motor.

Prior to advertising the item for sale, O'Dea conducted a long series of boat tests, on the Hackensack River in Northern New Jersey, while Jones ran shop tank tests under different and increasing loads by means of variable discs of the water-brake type similar to the set-ups used by Dean Draper a few years back.

Claims on the new Red Head conversion are held to the conservative side. As shipped, the combustion chamber volume, at top dead center to the top of the spark plug hole, is exactly 20 c.c. with the speed kit installed on either a KG-7 or a Mark 20H and used with Mercury factory pistons and the head gasket supplied with the kit. The head gasket is of the "paper" variety, a special Johns-Manville product, which to date has not experienced compression blows at any compression ratios tested. Jones feels that the factory pistons of forged aluminum are excellent and that the entire assembly will perform excellently using the original pistons and rings as they come with the motor. Standard compression ratio on the Red Head is 8:1. Tank tests conducted with a strictly stock factory Mark 20H indicated that an increase of 300 rpm was normal with the installation of the kit, using stock tank gasoline and no modifications other than the block and head. On underway tests, with several different three-point B hydros, the 300 rpm increase with identical propellers was also standard.

The stock factory set-up on the Mark 20H is 21-21½ c.c. with the KG-7 ranging from 23 to 24. The minimum permissible on the 20H is 17 c.c., and on the KG-7, 22 c.c.

Jones has stated that if a driver wishes to experiment with a compression ratio higher than the 8:1, as shipped, he can machine the head of the Red Head block component to just under 1/32" (.030"), which will lower the volume approximately 1½ c.c. For a driver who wants to go lower in volume and boost his compression ratio still farther, Jones recommends a switch to a piston similar to Clyde Wiseman's Wiseco pistons, since the deflector contour of the Jones-O'Dea head will match the Wiseco to the extent that any compression ratio can be obtained without machining the head by merely regulating the amount of dome height on the piston. Factory pistons are flat, so that machining more than .030" from the head (which will boost compression to about 10:1) will cause the piston to strike the exhaust deflector at t.d.c.

Jones also cautions drivers with Red Head conversion kits as to the limitations imposed on compression ratios by fuel and also to the fact that heat ranges available from 14 mm plugs with ⅜" reach are limited.

Those drivers who are planning to run high compression ratios and who have found that K-3s in the Champion range are still not sufficiently cool, may well switch to a Champion LA series plug (designed for high compression, foreign car engines), using an LA-11 as a starting point. It is also possible to re-tap the Jones Red Head for an 18 mm plug, to gain the colder ranges found in the R series used by the alky burner drivers.

This speed conversion kit has been designed with two purposes in mind: to race in modified stock circles; or to convert a stock motor over wholly to alcohol and to run with the alky burners. In either event, the block and head set-up offers an initial quick boost of 300 or more rpm. At present, the set-up is intended for use with open exhausts. However, Jones and O'Dea are also working on an underwater type exhaust so that a pleasure boat owner may equip his stock motor with a Red Head conversion complete with a water jacketed exhaust cover and still gain considerable acceleration and top speed.

The kits at present may be purchased directly from the manufacturer or from franchised outboard motor dealers. The kit is sold complete with gasket, head, block, the necessary tank brackets and exhaust cowling for the KG-7 kit or the supports and exhaust stack for the 20H as well as the water fittings with tubings for either motor. Since the accessories for the conversion kit will vary, depending upon which model B the conversion kit is for, any drivers interested in making such a conversion should be certain to specify which kit is desired. (End)

Outdoors With the Outboards

(*Continued from Page* 11)

large clothes closet; a dining table; a davenport that converts to upper and lower berths at night; and a rollaway bed for the occasional guest. Headroom in the cabin is 6 feet 3 inches. The forward deck, which measures 8x8 feet, makes an ideal place to lounge on steamer chairs in the sun. With a 16-hp motor, the River Queen will do 10 mph. The price, F.O.B. Gary, Indiana, is $1,995.

AN EXCITING new craft is the Scamp, a pusher-type, self-propelled, plywood surfboard produced by Dean's Marine Engineering, Janesville, Wis. It can be powered by any outboard motor developing from 5 to 16 hp and can be used to carry from one to three persons, to tow water skiers, as a swimming and diving float and even as a fishing boat. An upright steel handlebar holds the cut-off switch and throttle control. The operator holds onto this bar and steers the Scamp by shifting his weight toward the desired direction. (Note the similarity here to the Heli-Vector.) The Scamp weighs about 85 pounds, is 8 feet long and has a 4-foot beam. It is available in blueprint form, in a special do-it-yourself pre-cut kit or completely finished and ready to use.

SOMETHING NEW, in the form of outboard boats with one-piece plastic hulls, has been introduced by Bowman, Inc., Little Rock, Ark. The resin-impregnated Fiberglas hulls are molded for Bowman by Goodyear Aircraft Corp., Akron, Ohio, in a 700-ton press using precision-machined metal dies and intense heat. Full-length oversize bottom stringers form molded-in flotation chambers that, regardless of hull damage, will support occupants, their gear and the heaviest outboard motor made. Three models of this 16-foot boat are distributed by Bowman—a double-cockpit runabout, an open runabout with a forward deck and a utility boat.

MAKERS OF boat trailers, who have seen sales for their industry soar from 1,000 units in 1939 to some 100,000 in 1954, organized the Boat Trailer Manufacturers Association recently in Chi-

cago. Spokesmen for the new association pointed out that the trailer has become an integral part of the boating picture—that boats, motors and trailers now go together to form "complete packages of fun." The immediate objective of the Association is to establish manufacturing and operating standards. One proposed recommendation that will be welcomed by outboard enthusiasts everywhere is that every manufacturer make spare parts available for a minimum of three years for every model he markets.

Officers of the Boat Trailer Manufacturers Association, elected at the organization meeting, are: James E. Olney, President; Frank H. Peterson, Vice-President; D. Benjamin Roy, Secretary-Treasurer; and James E. Cunningham and William F. Miller, Directors.

INSTALLMENT BUYING of boats and motors is becoming increasingly easier to arrange as banking circles learn more and more about the potentials of boat and motor financing. This is good news for all of us because it means that we can obtain the outfits we have always wanted and can pay for them as we use them. To help this trend along, the Outboard Boating Club of America is preparing an educational program to acquaint banks with the lustily growing outboard market. The outboard industry itself is also working to ease installment buying.

ARE YOU familiar with the U. S. Coast Guard Auxiliary? If not, you should be because this organization, which is made up entirely of unpaid volunteers, is doing a tremendous job for boating in general and outboard enthusiasts in particular. Upon request by you, the Auxiliary will examine your boat and equipment to see if they meet Coast Guard standards for safety. Each boat that passes this test receives a safety decal that can be proudly displayed on the windshield.

Also, the Auxiliary will set up an organized patrol of any outboard event for the purpose of preventing accidents. A recent example of this service took place during the predicted-log race for outboard motorboats sponsored by the United Sportsmen Outboard Club the weekend of April 23-24. Ninety-seven outboards participated in this race, which ran from San Pedro, Calif., over the waters of the open Pacific to Catalina Island and return. Twelve Auxiliary vessels and two regular Coast Guard cutters patrolled the course. All of the contestants but one completed the race. The one exception strayed from his course because of low visibility and was reported by a Swedish freighter. The freighter stood by with a line on the boat until the arrival of one of the Coast Guard cutters. Needless to say, the race was an adventurous affair and the fact that it was successful was due in no small measure to the close cooperation of the Auxiliary and Coast Guard vessels.

Another activity of the Auxiliary that will find favor among outboard enthusiasts is its sponsorship of various boating courses. The simplest of these is a one-night affair for beginners. It consists of a lecture on the basic principles of boat handling and an outboard-safety motion picture. All those who attend receive copies of an informative booklet on outboard safety. This booklet, prepared by the Auxiliary in cooperation with the Outboard Boating Club of America, explains by word and picture the basic art of handling outboard motorboats.

Not quite so brief is the Public Instruction Course, which is held each winter. Graduates of this receive Coast Guard Basic Seamanship Certificates. Should you decide to join the Auxiliary itself, there's a third course you must take. Upon signing up, you become a provisional member of the Auxiliary and then take the course to qualify for full membership. Among the texts used are the American Red Cross *First Aid Textbook* and Charles F. Chapman's *Piloting, Seamanship and Small Boat Handling*.

Information on Auxiliary activities in your area can be obtained by writing to United States Coast Guard Auxiliary, Washington 25, D. C.

AND SPEAKING of Chap's book re-

(*Continued on Next Page*)

Outdoors With the Outboards

(*Continued from Preceding Page*)

minds us of the United States Power Squadrons, which, now in their 42nd year of instructing recreational-boating enthusiasts in the ways of the water, use Chap's treatise as their standard textbook. There are 177 Squadrons with 26,156 individual members. This represents a gain of 1,363 members since the end of December, 1954.

More than 25,000 men and women are registered as students in Squadron courses, which range from basic instruction in piloting, open to all persons anywhere in the U. S., to more advanced courses that are open to Squadron members only. The lecturers and instructors are all Squadron members who have volunteered their services. Full information on the Squadrons can be obtained from National Headquarters, USPS, 9 W. Demarest Ave., Englewood, N. J.

ANOTHER ORGANIZATION that is devoted to your welfare is the Outboard Boating Club of America (the same mentioned often above). One of the many valuable services performed by OBC is the publication of a mimeographed pamphlet titled *Legislative Bulletin*. This pamphlet contains a roundup of the more important boating bills introduced in the various state legislatures. It describes the bills, comments on them and then states OBC's position—"for," "against" or "noncommittal." As an example, the latest Bulletin contains the following information concerning a bill introduced in the legislature of my home state, New Jersey:

Senate Bill No. S-219. Introduced by Senator Farley. Referred to Highways and Transport Committee. Bill regulates sale, purchase, transfer and regulation of outboard motors. Certificates, to be issued by Fish and Game Agencies, to cost $4 plus 50 cents issuance fee. Duplicates to cost $2.50. Record search to cost $2. Penalty for noncompliance to consist of $50 fine or 30 days in jail. OBC comment: "This revenue producer at the outboard owners' expense should be strongly opposed by every outboard owner, dealer, club, etc." OBC's position: "Against."

If we are to protect our fast-growing sport we must bring the influence of aroused public opinion to bear on our legislators to kill proposed bills of this sort and make sure that only worthwhile legislation is passed. It is therefore strongly urged that every boating club write to the OBC, 307 N. Michigan Ave., Chicago 1, Ill., asking to be put on the mailing list for future issues of the *Legislative Bulletin*.

As Guy Hughes, Executive Director of OBC, has said, although "some of the proposed laws have been prepared in the spirit of OBC's *A Recommended Uniform Boat Regulation Act*, which seeks to provide a maximum of public interest with a minimum of restriction for the nation's millions of boating enthusiasts, other proposals now in the legislative hoppers are cause for alarm on the part of the boating public. . . . Unless all segments of . . . boating . . . rally, in their own states, to the support of enlightened legislation that has been introduced and make known their objections to unrealistic proposals, the goal of uniform and fair boating regulations throughout the nation will meet with a severe setback."

PROOF THAT skiing is not limited to resort areas is an announcement from the American Water Ski Association headquarters in Chicago that a new water ski club is forming in Valdez, Alaska.

Maurice Paige, who claims the record of being the AWSA member furthest removed from the more conventional water skiing surroundings, has requested organization data from the parent group. Paige states that the skiers in his area use the surface of Prince William Sound and that skiing on this body of water and skiing on snow is very much the same . . . the water never warms up above 34 degrees!

THE NATION'S taste in outboards is running toward the higher horsepower models, according to a report from the market research staff of the Outboard Boating Club of America.

In 1941 the average outboard motor sold had a 3.6 horsepower rating. This climbed to 4.2 horsepower in 1946 and zoomed to 10.3 in 1954. The market analysts of OBC are confident that the average power rating of outboard motors purchased this year will be at least 12 horsepower.

This steady increase in horsepower is a reflection of the family boating trend. While small fishing boats can manage quite nicely with smaller horsepower motors, the larger boats used in family boating activities call for more powerful motors.

NATIONAL Water Ski Championship tournament will be held in Lakeland, Fla., Aug. 26, 27, 28, according to an announcement by Charles R. Sligh, Jr., Grand Rapids, Mich., president of the American Water Ski Association.

Sligh, in commenting upon the selection of the Florida site, noted that the host club, Lakeland Water Ski Club, has been one of the most active groups in the parent organization in promoting and staging successful tournaments.

"The Lakeland club's success with regional and district tournaments has been so noteworthy, that we felt they could do an equally fine job with the national championships," said Sligh.

A field of 125 skiers is expected to take part in the meet. This large entry will set a record and make this year's event, the 13th annual championship test, the largest ever held.

THE NEED FOR more boating facilities prompted the Outboard Boating Club of America to produce another booklet aimed at improving the lot of the boating public.

The new book is "America's Growing Need . . . Outboard Marinas," published jointly by OBC and the Socony-Vacuum Oil Company.

The marinas book is profusely illustrated with photos and drawings and is designed to aid communities, boat and motor dealers, clubs and boating groups in the establishment of more and better outboard marinas to meet the needs of the rapidly expanding boating population.

Don't let that word marina throw you. It is a coined word that describes an establishment providing complete boating facilities, fuel, docking, wet and dry storage, service and supplies.

The booklet points out that a community or an individual may develop a waterfront property into a profitable outboard marina. In many cases outboard boat dealers will want to consider the establishment of a marina in conjunction with their present business. In any case, such a facility would be a community asset.

There are numerous advantages that an outboard marina can bring to a community. The booklet points out that the outboard marina will provide healthful recreation facilities, convert unsightly waterfronts into profitable and pleasant properties and improve the property value of adjoining areas. The local merchants handling gasoline, boats, motors, fishing tackle and food would have an increased trade from boaters using the marina facilities. The marina would provide safer boating and offer another inducement for people to live in the community.

Copies of the booklet are available free upon request to OBC, 307 North Michigan Avenue, Chicago 1, Ill., or to the Socony-Vacuum Oil Co., Small Craft Division, 26 Broadway, New York 4, N. Y. (End)

Sammamish Slough

(*Continued from Page* 17)

was first in the up-river heat and Farr first in the down-river heat, but Sullivan sped over the course in the least elapsed time. Al Karelson placed third.

The other class winners, in order of finish, were:

D-runabout: Al Benson, George Taylor and Ken Ferguson. B-hydro: John Robinson, Harold Davies and Hank Chevalier. A-hydro: Ray Holiday, Dud Stuart and Jim Hale. C-runabout: Sid Sato, Peter Laush and Walt Edson. B-runabout: Andrew Thompson, Howard Anderson and Gerald Lamplin. A-runabout: Billy Schumaker, Donnie Benson. DU-2: V. F. Halsey, Jack Swanberg and Carl Biber. (End)

It's News

(*Continued from Page 3*)

NEW WIZARD OUTBOARD

Western Auto Supply Company has added a new alternate-firing 4-cylinder model to its line of Wizard outboard motors. Known as the Wizard Super Power 25, the new motor develops 25 horsepower plus at 4000 rpm. Top speed is around forty miles an hour, according to company officials.

Designed for cruisers, runabouts, and large utility boats, the new Wizard 25 is available with either hand-operated recoil starter or electric starter with generator. A front-located gear-shift lever with forward, neutral and reverse, plus twist-grip throttle lets the operator maintain full control even in crowded parking areas. Complete remote control unit is optional at extra cost.

Weighing about 100 lbs., the new Wizard 25 has a long range fuel system, with non-pressure tank. Fuel is fed to the motor by an automotive-type fuel pump mounted on the engine powerhead. "Quick-snap" connection provides instant hook-up between fuel hose and motor.

Other Wizard outboard motors include the Wizard Powermatic 12, the Wizard Super Ten, and the new Wizard Super Five.

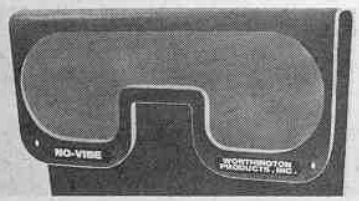
PLANS AND FRAME KITS

Glen L. Marine has announced a new design series with a complete range of power craft, both inboards and outboards, in runabout, utility, and cruiser models, from 11' to 23'. A full Glen L. series will be available on most designs —complete plan sets, full size patterns, or frame kits. Another feature will offer a trailer kit unit that allows the builder to assemble his own trailer.

All designs have been especially prepared for the amateur builder, and step by step instructions are furnished along with the complete drawings.

NEW MODEL NO-VIBE TRANSOM PAD

Worthington Products, Inc., Marine Division, 441 Lexington Avenue, New York 17, N. Y., originators of noise-reducing No-Vibe Transom Pads for outboard users, announce the introduction of a new model. Called the Hevi-Duty, it is designed for boats which have a bracing knee in the transom.



The inside flap of the Hevi-Duty transom pad has a cut-out section which accommodates the protruding knee, while giving sufficient depth and clamp gripping-space to the pad. A rigid insert in the pad, which is also indented, prevents the clamps from cutting through the rubber. The pads fit all transom thicknesses, and may also be used on boat transoms without knees. The Hevi-Duty model is, like the regular No-Vibe Transom Pad, priced at $3.95 for the standard style in black rubber, and at $4.95 for the de luxe version in white rubber. It supplants the "Lowboy" model which is being discontinued.

WATER SAUCER NEW TOWING THRILL

White Bear Water Ski Company, 5345 Bald Eagle Blvd. West, White Bear Lake, Minn., has announced its Fly-N-Saucer as a novelty for the water skier. The Fly-N-Saucer, which is of a specially molded design, is quite easy to master and is suited for towing behind motors of 10 to 22 horsepower.

PLASTIC SPRAY FOR MOTORS

Krylon Inc., manufacturers of a clear acrylic plastic spray, are producing the product in aeresol dispensers for primary use of spraying exposed parts of outboard and inboard motors for protection against water and dampness. Krylon's crystal clear spray periodically used on the outside shrouds of motors and on the underwater units will aid in preventing corrosion and protect the shells against pitting. The product is carried by most marine dealers. (End)

Azalea Festival Marathon

(*Continued from page* 13)

was licked. A passing pleasure boat driver, however, drew along side and offered to take DeWald in tow. Instead, DeWald had a brainstorm, asked if he could borrow a couple of gallons of gas. The leak in the fuel line was sufficiently slow so that Craig figured two gallons would carry him home, allowing for leakage. It did, to a well deserved win, with about a 50-yard margin to spare.

Second place in AU went to Bob Brown of Salisbury, Md., who was driving for Ed Biscoe of the same town. In six previous marathons, the best Bob had been able to turn in was a second in the 60-mile Solomons Island event in '54.

The B Stock Hydroplanes reestablished a point made by the alcohol burning drivers years before—namely, that unprotected, long distance, driftwood-strewn water is unsuited to the step bottom hulls. Al Bauer, referee of the event, sagely enough, shortened the overall distance for the hydro course from 64 to 48 miles—4 laps of 12 miles each—after the AU, CU, and 36 c.i. drivers (who had competed as one division) experienced boat and personnel beatings that have seldom been matched in stock racing events. The B Stock Hydro drivers, who were to sandwich in their go at the angry water before the BUs and DUs took off, eyed the course with certain misgivings. Only five of the registered nine contestants decided to wet their lumber. Two of these wet it too thoroughly and swamped before they reached the starting line. Two others took a relatively safe approach at the event, but not so Bill McClung, Portsmouth, Va., in his own designed and built three-pointer. Bill moved into an early lead and, at the end of 12 miles, had a margin of more than three-quarters of a mile over his closest competitor, Scott Straus. McClung rounded the turning buoy at the start of the second lap with an apparent unconcern for the foot-and-a-half high chop and occasional rolling, three-foot waves. He left the turning buoy full bore, proceded about 200 yards in good shape, with his threepointer dancing lightly over the wave tops, when suddenly he hit an outsized hump, and McClung and his boat, "Miss Dixie Belle," parted company. For a few seconds it looked as though the nice-handling three-pointer had turned temperamental. Then the spray subsided and McClung was seen swimming toward his stalled craft which was amazingly enough still right side up. Unfortunately for McClung, who might well have been able to get underway if he had removed his spark plugs and dried them out, he accepted a tow to shore, figuring to get a new set of plugs from his pit stooges. This officially put McClung out of competition, although the sponsoring club later awarded him the third place trophy but no official points.

The rest of the hydro event was somewhat anticlimatic. Scott Straus, an aggressive and heady driver who had decided three-quarter throttle was much the wiser approach, had skirted the shore line, which, though offering a longer route than the more direct channel, gave him greater protection. Straus was rewarded for his strategy. He moved into the lead and, two laps later, with one lap still to complete, Straus was more than a full lap ahead of the only other driver still running, Orbie West, of Portsmouth. Twice West had swamped and been forced to bail out his rig. Straus, who was driving a motor owned by Tom Johnson, the A.P.B.A. Stock Supervisor of Region 4, was flagged to the pits by the motor owner, who valued his motor more than the possible winning of a first-place trophy.

Since only two boats were running at the time, Johnson's suggestion to Straus was that the Maryland racer settle for second place. However, as it turned out, when Orbie West reached the end of his second lap (still one full lap behind Straus), West decided that 24 miles of nearly ocean-like going in a hydro was enough for him and rather than continue on, he was contented to settle for second spot in the curtailed event.

The DUs and BUs were called out, and the spectators were treated to a real change of pace, with some close competition. The Coast Guard, during the course of the events, had continually queried the officials as to whether they were going to go on with the program and how soon the entire card of racing would be completed. Meantime, small craft warnings had been issued, but as long as the racing craft were active on the water, small craft spectators also refused to leave the scene. At this stage, the course was altered again to 6 miles per lap and 8 laps, or 48 miles for the race.

In BU class, in which the contestants were vieing not only for class trophies but also a huge new Kiekhaefer Perpetual Trophy, Tom Vandenbusch, Birdsboro, Pa., in a Mercury 20H-powered Speedliner called "Saw Bones," led C. W. Givens, Norfolk, Va., in a 20H-powered Whirlwind hull, "Tom-Kat," by less than three boat lengths for two full laps. On rough water, this ding-dong tangle for front spot was terrific to see. Shortly after the beginning of the third lap, Vandenbusch's hull flipped when an S-hook slipped out of his steering bar, and Givens took over the lead, tagged closely by Paul Rothenberger, who had steadily been picking up time in his Raveau. Midway through the fourth lap, Givens went out and Rothenberger took his turn as leader. The Reading, Pa., driver held onto the lead for the balance of the distance despite two rather painfully cut knees. Rothenberger not only won the Kiekhaefer trophy and the class title but also a wife, since his fiancee had promised Rothenberger she would marry him when he won his first marathon!

In DUs, which were run simultaneously, Les Kahn, in his Mercury 40H-powered Raveau, moved into an early lead in the first lap and was never headed. However, Kahn twice ran into difficulties—once, on the fourth lap, with more than a 300 yard margin over Nolly Simpson in a Merc-powered Champion hull, Kahn's boat, "Navy Flyer," began to falter. The high winding motor slowed down and started to miss.

Kahn dejectedly thought for the first time in his six-marathon career that he was destined not to finish. Then suddenly he realized that in his anxiety to nurse out a few added rpm he had crouched to the rear of his hull and was stamping on his fuel line, pinching off the source of fuel. Simpson had closed to within a matter of a few yards before Kahn again had his rig running at full throttle.

Again in the sixth lap Kahn's engine faltered and nearly died when the remote throttle control bowdoin cable snapped. For the remainder of the distance, Kahn was forced into an awkward riding position as he handled his throttle control manually at the motor. A combination of a 3" section of stiff bowdoin wire cable still clamped firmly in the motor's throttle mount and the partially subsided but still plenty rough water made his last eighteen miles painful ones since the jagged bowdoin cable pierced his palm repeatedly. When he finished the event, he looked as though he was holding a raw and bleeding hamburger in his left hand. CU competition record holder and retired racer turned motor inspector, Horace Nixon, Norfolk administered first aid to Kahn and other drivers suffering from minor cuts and abrasions after their jolting experience (End)

Breaking the Bottlenecks of Boating

(*Continued from Page* 20)

was the promotion of boat launching facilities in the area. The lack of launching sites within city limits made it necessary for club members to trailer their boats some 25 miles to Stillwater, Minn., or to Hudson, Wis., to put into the river for their weekly summer cruises.

Armed with booklets and a film on launching ramp construction obtained from the Outboard Boating Club of America, members contacted city councils, county commissions and park officials of Minneapolis and St. Paul. None of these agencies, however, had funds which could be allocated for such projects.

It was then suggested that the club contact Civil Defense authorities and offer its services as an emergency task force.

If bridges linking the cities across the Mississippi were destroyed, the channels would be completely blocked and navigation cut off. In such an event, it was pointed out, the only means of river transportation would be portable boats which could be moved up and down the opposite shores on small-boat trailers.

As a result of these efforts, the 10,000 Lakes organization now has available a concrete-and-steel launching ramp, 35 feet wide and 80 feet long to the lowest water mark, on the Mississippi. Moreover, plans are in the works for constructing a yacht harbor in connection with the ramp which will accommodate 100 boats from 60 feet in length down to outboard runabout size. Also contemplated in the launching ramp area, located on Harriet Island, are atheletic fields, swimming pools and trailer and automobile parking facilities.

The moral could be summed up: If you have a boating bottleneck in your area, organize a boating club. From the Outboard Boating Club of America (307 North Michigan Avenue, Chicago 1), you can get a free booklet on how to go about it; the booklet is complete with such items as ideas on how to get started, samples of constitutions and by-laws—even samples of promotional letters designed to get other boaters interested in the club idea.

Also from OBC you can obtain booklets giving details on ramps, docks and boat houses. The latest in the series concerns outboard marinas, sample illustrations of which are shown elsewhere in this issue. For meetings with city councils and other agencies, OBC has a sound-color motion picture for loan.

In Chicago it was at the suggestion (with perhaps some pressure) of boating clubs that the Park District has set up three launching ramps giving outboarders access to Lake Michigan.

In Arkansas, planning, cooperation and hard work by members of the Greater Little Rock Boat Club have resulted in the construction of facilities that include a concrete launching ramp, floating docks and a playground for the small fry.

In Tacoma, Wash., the Tacoma Metropolitan Park District has built a reinforced concrete ramp for the use of Puget Sound boaters.

At a total cost of $1,900 for labor and material, the city of St. Joseph, Mich., built a launching ramp and yacht basin to serve boaters of that area. The facilities have become so popular that another similar development is planned for the near future.

In the heart of California's "desert empire," members of the Pasadena Outboard Club and others have the use of a launching ramp on the Salton Sea.

In Florida, the Leesburg Outboard Club's facilities were built and paid for by club members.

When you are a member of a club, you will also usually find yourself to be welcome to use the facilities of other clubs—even the facilities of commercial enterprises—on excursions away from home port. I know of one yacht basin operator who charges individual outboarders $3 per launching for the use of his ramp. When a visiting club uses the ramp, he charges 50 cents per boat. You can buy a considerable amount of cold soda pop for the $2.50 saved on each launching. Where several clubs in an area have their own facilities, reciprocal arrangements are often worked out on this basis: If we are welcome at your place, you are welcome at ours.

The outboard marina idea is beginning to catch on around the waterways—a marina being an installation where not only launching ramps are available, but also wet and dry storage, lockers, eating facilities and repair, service and sales.

A Chicago dealer this Summer began experimenting with what might be called a dry-land version of the marina. He obtained the use of several thousand square feet of warehouse space a few minutes drive from one of the Park District launching ramps on Lake Michigan and made this available to the boating public on a fee basis. For apartment-dwelling boaters, who have no convenient way of storing their boats at home, and suburbanites who would rather not face city traffic to get to the lake, the dealer stores boats (on owners' trailers) when not in use, services them and keeps them ready for call at any time.

Boat trailers, auto-top carriers, launching ramps, boating club activities, marinas—all these devices are breaking the bottlenecks of boating . . . wherever roads lead to water. (End)

The Underwater World

(*Continued from Page* 18)

different types, and, for the rubber guns, additional rubber bands. I would recommend 10 spears, 15 head points, and 50 feet of nylon rope for each gun.

Let us say that you are cruising in the Caribbean, and you have established your routes. On almost every route there are coral reefs which you have always carefully avoided. But now these reefs are your destination for a day or several days of fascinating skin diving. You have the great advantage of being able to go to places where few people can, and the fish will be plentiful. Locate on your map the reef which you wish to explore, and in consideration of the wind and tides, decide where you will anchor. It is advisable to take a small boat and simple diving equipment, and explore the reef to see if the water is clear, the coral interesting, and if there is an interesting supply of fish; then establish your definite location, and ready your diving gear.

The sport of spear fishing is based on the natural curiosity of the fish. Everyone has noticed that when a pebble is dropped into a pond or an aquarium, the fish will come to see what has happened. Fish are frightened by a lot of splashing, so when you are swimming, you should move regularly and quietly, with your feet kicking just below the surface of the water. When you see an interesting fish to catch, dive—and do not kick until your feet are completely underwater. Dive to the level of the fish and swim towards him. With practice, you will be able to stay under water and wait for the fish to come to you, which they will invariably do if they have not been frightened. When you are within ten feet of the fish, aim and shoot.

Everyone has heard extraordinary stories about barracudas, sharks, and other underwater dangers. It is definitely ascertained, and I agree from my own experience, that barracudas are not dangerous and will not attack you. One must be cautous with sharks. If you see sharks, which is not uncommon in the Caribbean area, you will notice that they usually keep their distance and have no desire to annoy you. If one should appear too curious and come too close, make an aggressive movement towards him, and the shark will retreat—they are really cowards. If a shark is persistent and returns, take a shot at him and forsake your gun, if necessary. Under any circumstances, do not panic and swim madly towards the boat. It is preferable, if not indispensable, to keep the small boat near you all the time, and to always have a companion in the water with you when skin diving.

Be careful of the coral. If you do not know the types of coral, it is better not to touch any. Some coral is razor-sharp and certain varieties can inflict a painful burn

A word of caution concerning spear guns, which cannot be over-emphasized: never charge a spear gun before entering the water, and never leave a loaded spear gun—even with a safety catch—lying in the boat. All skin diving and spear fishing equipment should be rinsed in fresh water after use, to keep it in good condition. To keep the mask from fogging when you are wearing it, the simplest method is to clean the glass with spit—yes—and then rinse with salt water. Do not leave masks and fins lying around on deck in the sun, for the heat can affect the rubber after much exposure. There are several books written about spear fishing, which give detailed instructions and advice, that would be interesting additions to your nautical library.

Not the least of the pleasure of skin diving and spear fishing, is to be able to have the most delicious fish, straight from the ocean to the frying pan—and fish of your own choosing! One time, while cruising in the Caribbean, our finances were in very poor circumstances, quite insufficient for five robust adventurers. It was only spear fishing that kept us in food supply: fish to eat, and fish to trade for potatoes to eat with fish.

I am sure that you will certainly double the pleasure of your cruise, if you take advantage of the possibility you now have to explore this fascinating underwater world and join the growing number of skin diving enthusiasts.

(End)

COVER STORY

THE BEAUTIFUL color photograph used on our cover this month was taken by Ardean Miller III, and is reproduced through the courtesy of Evinrude Motors. The location is in the Grand Teton National Park in Northwestern Wyoming, which was created in 1929 and contains 94,893 acres. Snow-capped Mt. Teewinot is in the background. Nearby Lake Jenny is famed for its trout fishing. Wyoming, noted for the grandeur of its scenery, is also the location of the famous Jackson Hole area. The boat is an Evinrude-powered Lyman.

ALL 8 ISSUES OF BOAT SPORT IN 1956 WILL BE RESERVED IN YOUR NAME IF YOU SEND US THE COUPON BELOW!

PLUS THE DECEMBER 1955 ISSUE EXTRA WITHOUT ADDITIONAL COST

Many of our readers have written us that they have missed an issue of BOAT SPORT because their newsdealer was "already sold out." We regret that this condition will prevail, but because of the terrific expense involved, it is almost impossible for us to see that every newsdealer in the country is supplied with copies at all times. In order to avoid this difficulty, we urge you to place a subscription with your newsdealer NOW for 1956 — and, we will add the EXTRA December 1955 issue without charge. Tell your dealer to place your subscription order with his local American News branch. Or, if you prefer, use the coupon below. In this way you will be assured of receiving a fresh, clean, on-time copy of each issue hot off the press.

(Notice to club secretaries: Write Stan Dickey, BOAT SPORT, 215 Fourth Avenue, New York 3, N. Y., for special bulk club subscription rates.)

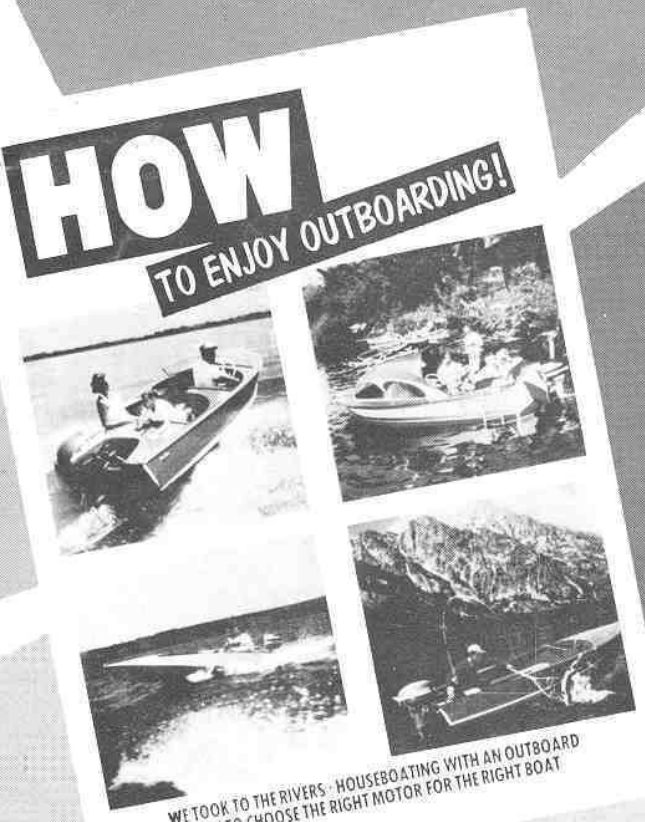
BOAT SPORT
Dept. BS955,
215 Fourth Ave., New York 3, N. Y.

Herewith $2.00 (or $2.25 for Canada and foreign) for all 1956 issues plus the December 1955 issue. Please send to:

NAME .....

ADDRESS .....

CITY ..... ZONE ..... STATE .....



HIT THE DECK FOR OUTBOARD FUN...

And Every page of HOW To Enjoy Outboarding is crammed with practical information to help you get all the fun possible from your outboard boat and motor. Articles on cruising, hunting, fishing, care and maintenance, water sports, safety, and waterways are all especially written and liberally illustrated to show you HOW to get more enjoyment for the whole family out of this new way of life. Now that outboarding has become one of America's fastest growing outdoor sports, inexpensive, easy, safe, whether you own an outboard now or are contemplating on buying one, HOW To Enjoy Outboarding is a magazine you don't want to miss. Get your copy NOW at your favorite newsstand, or send 25c for a copy of the August issue to the address below:

HOW To Enjoy Outboarding—215 Fourth Avenue, New York 3, N. Y.