

THE RUDDER

The Magazine for Yachtsmen



AUGUST 1939

Price 35 cents

THE RUDDER

Registered United States Patent Office
The Magazine for Yachtsmen

9 Murray Street New York, U. S. A.

Volume 55 Number 8

\$3.00 a year 35c a copy

CONTENTS

AUGUST 1939

WILLIAM F. CROSBY
Editor

ANDREW PATERSON
Managing Editor

ALAN GRAY
Associate Editor

W. MELVIN CROOK
Contributing Editor



SUBSCRIPTIONS

One Year\$3.00
Two Years 5.00
Three Years 7.00

Postage Extra

To Canada 50 cents a year
To other Foreign Coun-
tries, \$1.00 a year

THE RUDDER accepts no re-
sponsibility for unsolicited man-
uscripts, illustrations or other
material and none will be re-
turned unless covered by suf-
ficient postage. No dutiable
merchandise of any description
will be accepted unless prior
arrangements have been made
with the editor.

Copyright 1939 by THE RUDDER
PUBLISHING Co., New York.
NOTICE—The contents of this
magazine, including all articles,
illustrations, plans and designs,
are covered by copyright, and
their reproduction is absolutely
forbidden without the consent
and permission of THE RUD-
DER PUBLISHING COM-
PANY.

Published monthly by THE
RUDDER PUBLISHING COMPANY,
New York.

Entered as Second Class Mat-
ter, February 4, 1895 at the
Post Office, at New York, N. Y.,
under the Act of March 3, 1879.

THE COVER: Trouper, C. A. Tilt's 106-footer designed by John H.
Wells and built by Robert Jacob this spring
Rosenfeld

Editorial	7
Frontispiece	8
Wouldn't It Be Fun? By Carey Stevenson.....	9
New Power Craft	12
Imelda	14
New Zealand Racers.....	15
Trouper	16
An Ounce of Prevention By Alan Gray.....	17
Gasoline or Diesel? By Conrad Miller.....	18
New Auxiliaries	20
Small Welded Yachts By J. Murray Watts.....	22
We Buy a Boat By L. B. Cooper.....	24
Cruisers Race at Boston By Richard H. Anthony.....	25
Weather Wisdom Adds Enjoyments By William F. Crosby.....	26
Westbound to Tahiti By Edward E. Ruggles.....	28
What Boat Owners Should Know About the Law.....	30
Give Your Crew a "Break" By Harold S. Smith.....	32
Lake Hopatcong's Regatta.....	33
'Round in Hurricane By Kauffman and Mefferd.....	34
Sailing Yachts	35
Make Your Cabin Cooler By J. Emmett.....	36
Halliard Latch Locks Sail Aloft.....	37
Skua, Plywood Outboard By Chas. G. MacGregor.....	38
What the Law Requires on Trailers By Mel Crook.....	46

YACHT DESIGNS

Motor Yacht—St. Croix Ship.....	40	Auxiliary Ketch—MacGregor	41
Welded Iron Cruiser—Watts	42		

NEWS AND COMMENT

The Watch Below By John G. Hanna.....	39	Long Island Soundings By Davy Jones.....	48
More R.P.M. By Mel Crook.....	44	Racing and Club News.....	50
Snipe Class News.....	56		

Advertisers' Index on Next to Last Page

MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

PREVENTION (Continued from page 17)

quantities later on, but I have seen the stuff work when swallowed right on the very ragged edge of nausea. Chokes it right down again. I have seen a single dose of it fail, once or twice, but over a period of time it does its work. It takes a little time, if you are already under the weather, but if you keep dosing you'll straighten out.

The stuff is expensive but if it will keep you on deck for those first few hours when you are most likely to break down, it's worth it.

Unless you have found some other formula that suits you better, you might do well to consider a few of these suggestions. In any case, if you are subject to seasickness to even the slightest degree, make up your mind to do something about it from now on. You need be ashamed of seasickness only if you have made no attempt to conquer it.

**GAS OR DIESEL** (Continued from page 19)

but their temperature is usually 650 to 950 degrees F. which is a temperature much below the temperature of the gases in the exhaust manifold of a gasoline engine. The lower exhaust heat of the diesel engine results in its having a high Carnot and thermal efficiency. On the following upward exhaust stroke of the piston, the residual exhaust products are removed from the cylinder by being pushed out through the exhaust valve into the manifold. In a diesel engine the burned gases are removed more thoroughly than they are in a gasoline engine because of the much higher compression ratios reducing the clearance volume at the end of the scavenging stroke of the piston.

(To be continued)

**PLYWOOD** (Continued from page 38)

Before accepting delivery of your plywood panels examine the edges, particularly the long edges. If there are gaps or voids in the joints of the middle lamination, do not accept it. It is useless for boat planking. Also examine the outer layers of the panels and do not accept them if there are any joints showing on the outside. Each outer layer or lamination should be in one piece.

Use bronze, brass or galvanized iron screws, not nails. Do not countersink the holes for the heads in the thinner panels, that is $\frac{1}{4}$ " and under. Give the screw an extra turn with a hand screw driver until the head is flush with the planking.

Use only the best waterproof glue on all joints. Build the boat upside down on a form so that the frames will be at a convenient height from the floor to work comfortably. Three feet at the keel will be very suitable. In supporting the frames, be sure to arrange the form so that the hull can be lifted off easily when planked. The form should be well braced to hold it firmly in place. Install the keel, chine stringers, stem and transom first, fastening them to each frame.

Procure a panel of $\frac{1}{4}$ " 3-ply fir of the inexpensive variety and use this as a template to fit the bottom and side planking. You will find this cheaper in the end. After carefully fitting this plywood lay it on the good panel of "Resin Bonded Plywood" and mark it around the edges with a pencil. Then cut it out allowing a very little for refitting of the final panel. This template can be used for the opposite side.

Drive every screw in the planking, to be sure everything fits well; back them out, then apply the glue and redrive the screws. The seams must fit well to ensure perfect contact between the surfaces for best results. After planking the sides and bottom, remove the hull from the form and support it on a cradle. Before fitting the deck panel, remove all excess glue and clean out the interior; then apply one coat of Cuprinol or other wood preservative, especially on the parts not easily accessible. Drain or limber holes must be large enough and clean so that all water will drain aft where it can be sponged out. Keep the exposed parts of the hull well varnished or painted, otherwise the exposed laminations may develop surface checks.

As a precaution against a spill, I suggest that frame number 2 be made a watertight bulkhead, thus providing a large buoyancy

compartment in the bow and in addition, one might also arrange a watertight bulkhead fore and aft on each side of the cockpit, thus making the boat practically unsinkable even if run into and a hole stove on either side. These safeguards can generally be added very easily in a plywood hull; and they add so much to one's safety and peace of mind.

* * *

QUESTIONS AND ANSWERS

Q. (J. T. H., Seattle, Wash.) I am planning on building a 25 foot vee-bottom power cruiser this spring, and plan to use Weldwood for planking. I have seen your plans for your 21 foot design of all plywood. The main thing that has worried me is making the butts. I wrote to the U. S. Plywood Corp. on this matter and they replied that a fish plate of the same thickness as the planking with a row of screws each side of the joint and with a waterproof mastic between the pieces of plywood would give a strength of 90% of the original panel. But as a man can get the sheets only in certain lengths, that would make a continuous butt around the boat which seems to me a very weak construction. I suppose a man could cut the sheets to various lengths and thus break the joints from side to side and also between the chine and keel, and chine and sheer. I had also thought of using a skin made of two $\frac{1}{4}$ inch panels, laying them up like double planking and breaking the butts between the inner and outer skins. That is, where a butt occurred in the inner skin it would land in the center of the outer panel. Then with a fish plate behind each butt, regardless of whether it was in the inner or outer skin with plenty of fastenings, seemed the best way to me. But the objection to this is that it would run the cost to almost double of that for a single skin. So any information on this problem will be appreciated. We were thinking of using $\frac{1}{2}$ inch thick plywood throughout for planking although the company said $\frac{3}{8}$ inch would do for the topsides. If we use a single thickness on the topsides we may have to use $\frac{3}{8}$ inch, as my plans carry a very heavy flare. Any suggestions as to the best way to apply this material will be appreciated.

A. Since the length of Weldwood is limited at the present time to 12 feet it is necessary in using this material for hull planking to introduce butts. On a boat of the length you state it would be necessary therefore to have two butts on each side of the boat and possibly one or two on the bottom, depending on the shape. The material can be used on some of the interior framework and for the deck. I would not advocate the use of plans of a boat design using the conventional construction because plywood has developed an entirely different technique, and the substitution would become rather involved and complicated.

Q. (J. H., Brooklyn, N. Y.) Please answer the following questions regarding your "All Plywood" design advertised in THE RUDDER six months past: Can the frames, keel and stem, be all of plywood construction? Can this construction be adapted to a standard design such as the famous keel-yawl Sea Bird or Seagoer? Does it also apply to round-bottom designs?

A. In the construction of these boats the keel, stem, chine stringers and cross floors are not of plywood. They are either oak or Philippine mahogany. The frames are built up where possible of plywood with the addition of Philippine mahogany or oak. I have found it impractical in the present stage of the development of this material to put fastenings into the edge of the plywood, not because of any weakness but for the fact that thicker material would be required and this would be too costly. The Sea Bird and Seagoer are ideal types for the use of this material, but the construction would have to be rearranged since the framing in each of these boats is spaced closer to give support to the planks, by the use of plywood, frames can be spaced much further apart. At the present stage of manufacture it is not feasible to use Weldwood on round-bottom designs. The cost would be much higher and there would be little gained over that of the conventional form.

Q. (J. K., Allendale, N. J.) In an article "Plywood for Boats" in the April issue of THE RUDDER, the author states, "Do not countersink the holes for the screws in plywood." Will you kindly let me know how to get screw heads flush with planking if holes are not to be countersunk?

A. It is possible to get a screw head flush with planking especially in the smaller sizes by simply giving it one or two extra turns, and you will find the head will press the wood down so that the screw will be flush with the planking. A very slight countersink should be made where holes are drilled near the edge of the wood at the end of the grain, on the outside laminations.