AquaRacer...

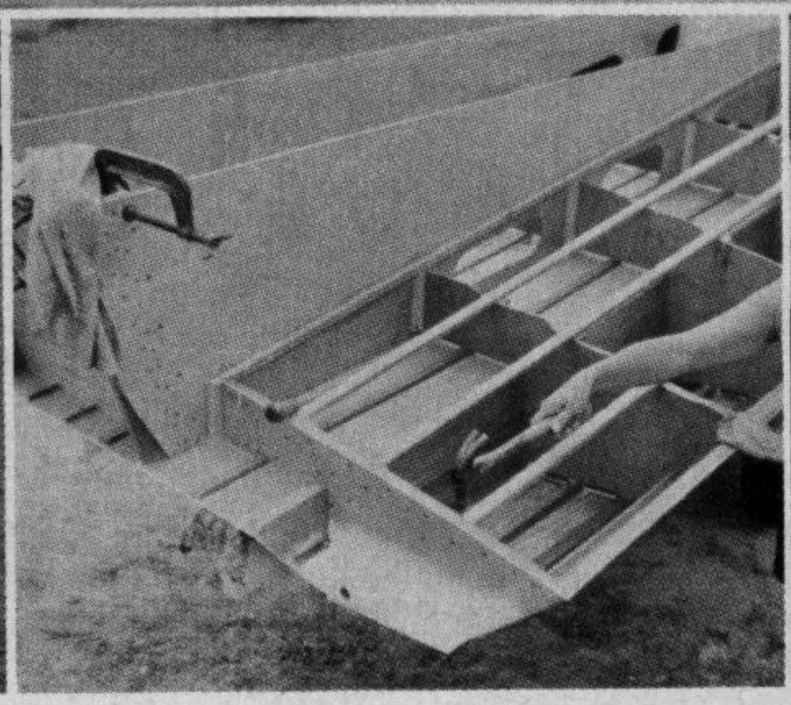
A Tunnel-Hull Racing Boat You Can Build

By Hal Kelly

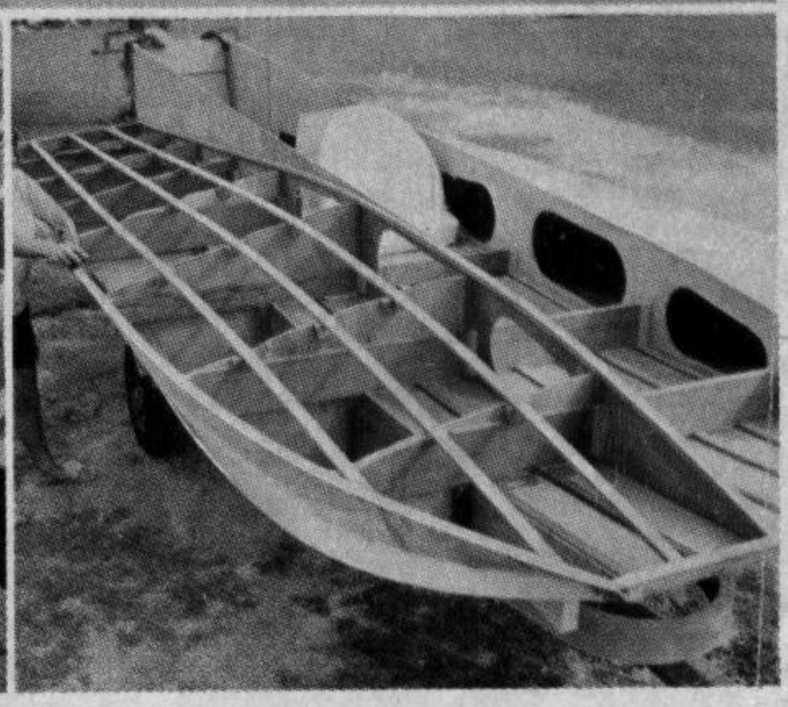




SPONSON inside planking. It's ¼-in. plywood, glued and nailed to the top batten.



DECK battens. Glue and nail each to ribs with 1¼-in. bronze nails. Note afterplane.



FAIRING the sheer. You may have to trim a bit so plywood sits nicely on battens.

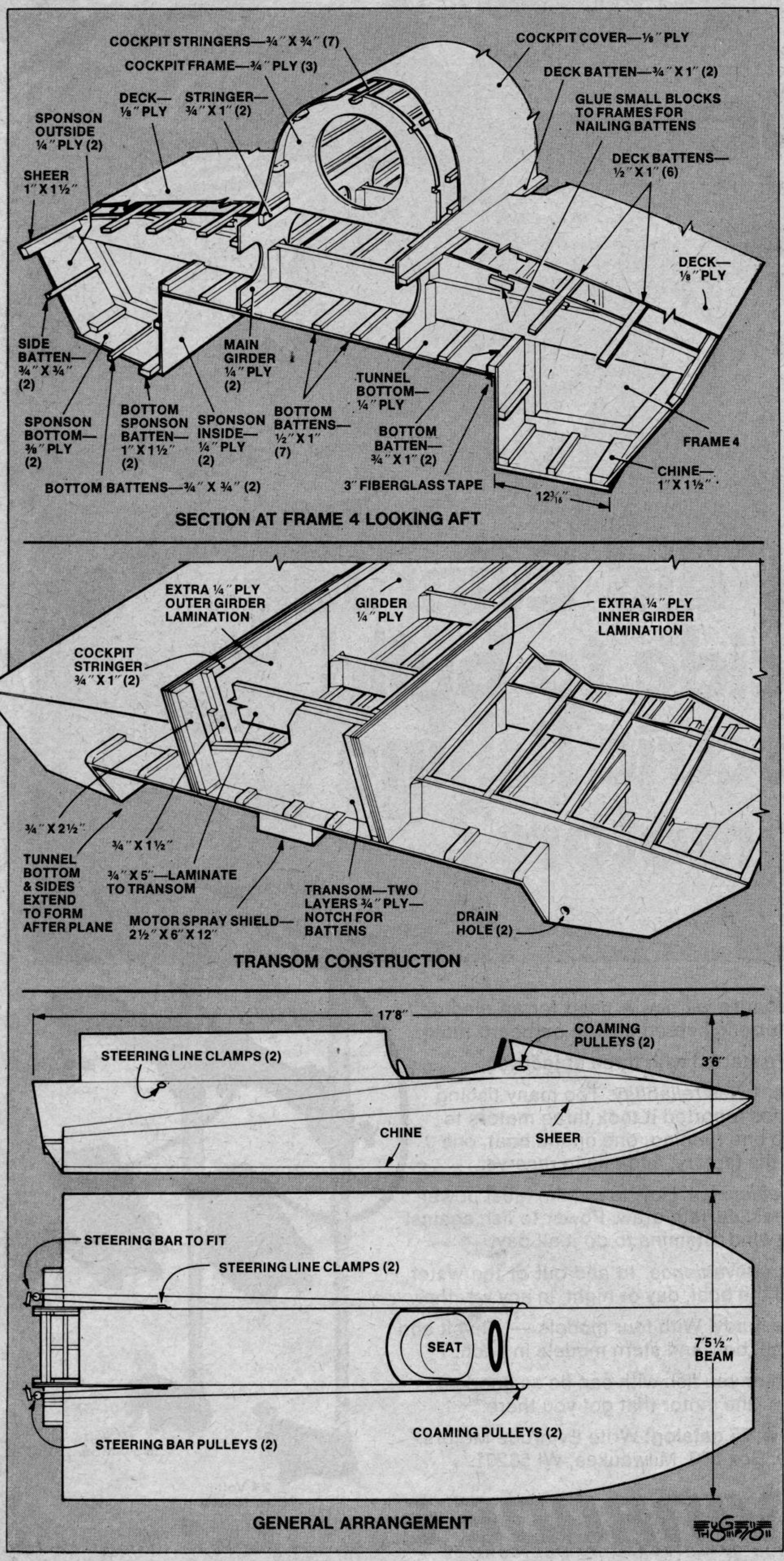
WHAT is an AquaRacer? Just about the rootinest, tootinest, scootinest racing boat to go on water, that's what! She's a tunnel-hull racing machine designed after the famous Scotti Crafts and Molinaris the big boys use in pursuit of those world-outboard speed records. With AquaRacer you can go after a record or two yourself.

Almost four yrs. ago we offered plans for AquaRod, a tunnel-hull speedster designed to go fast on the water, and fast she would go. But at the time, we didn't think of trying to race her. We just wanted a hot-rod for the water. Response to AquaRod was so great however, it got us to thinking.

It was obvious there were a lot of adventurous souls who didn't want just to go fast. They wanted to race! And they wanted to do it in a boat with a big engine on the transom. This means J class, which is stock outboard racing with the largest production engine.

The biggest impediment to going out to do J class racing is the cost of equipment. A Scotti Craft or Molinari goes for around $5,000. So we decided we would offer a build-it-yourself racing machine that would be fully competitive with the record holders. This meant, of course, a tunnel-hull.

We wanted a machine that would last for awhile. We'd heard of some engines coming up that would be bigger even than the current crop. This meant we wanted a boat a little bigger than the currently popular



AquaRacer...

16-footers. And we wanted a boat competitive enough that if its driver got pretty good he could slip on an S class engine (unrestricted, unlimited outboard) and haul it out to Parker, Ariz. to challenge those smart alec factory racing team boys. And we decided we wanted one of those factory boys to drive our boat and tell us what he thought.

Well, what we got was AquaRacer. She's 17 ft. 8 in. long, 7 ft. 5½ in. in beam and weighs 450 lbs. with engine. Now if you know anything about tunnel-hulls you know this is heavier than normal. But remember, this is no rail job. AquaRacer's built for the long, grueling runs, and we believe that with the right engine on her (like, say, one of those new V6s that'll be out in a year or two) she'll take every race.

The guy we got to drive for us was Johnny Schubert, a famous tunnel-hull driver from the Evinrude factory team. That's him in our pictures. He's had a few victories himself, and you'll have to get pretty good on the circuit if you expect to catch him.

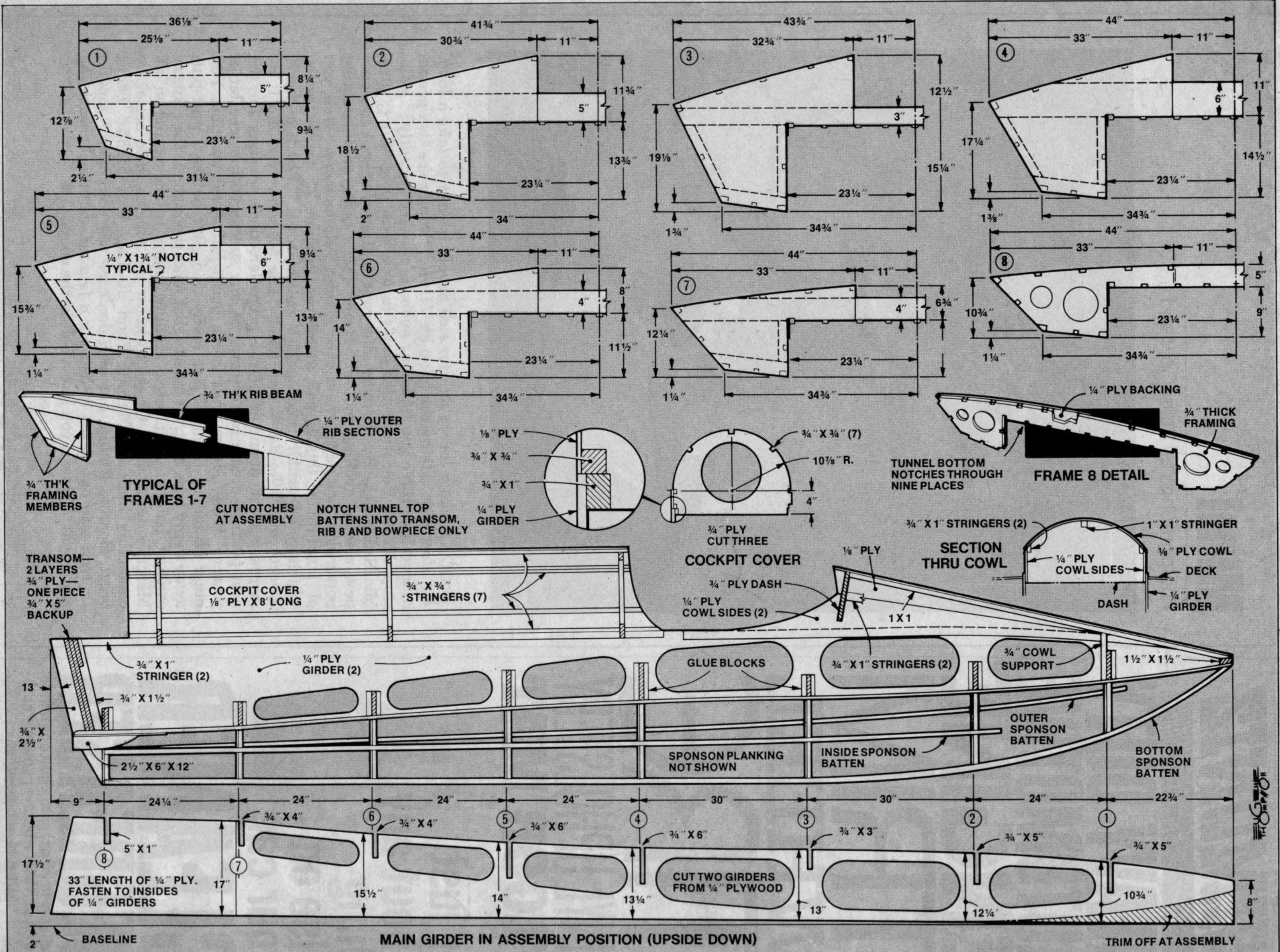
At this point you may be asking what is a tunnel-hull. A good question if you've been pre-occupied with the moon landings or have just come back from an Eskimo wedding on Baffin Island. A tunnel-hull is a boat with a tunnel running up the underside middle between sponsons on each side.

AquaRacer's tunnel is 46 in. wide. This tunnel is shaped to trap air under the hull and lift it up. Running wide open, you ride on just the last few inches of the sponsons, which means reduced wetted area, thus increased speed (but also less control, which brings up our only word of warning. Beware! Tunnel-hull racing can be hazardous to your health). The tunnel design was worked up to conquer rough water.

For power we borrowed one of Evinrude's 135-hp Strangler engines. Ace-driver Johnny went right out and hit 69 mph with it, which surprised him because he'd thought the boat was too big (wait until the V6s come out and he'll come asking if he can borrow our boat). At 69 mph and running at 5,600 rpm (the Strangler peaks at 6,200) AquaRacer developed blow-out, which is like cavitation only a lot worse.

Johnny had a race to run and couldn't stay until we jacked up the

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1
36⅛"
25⅛"
11"
8¼"
5"
12⅞"
9¾"
23¼"
2¼"
31¼"
2
41¾"
30¾"
11"
11¾"
5"
18½"
13¾"
23¼"
2"
34"
3
43¾"
32¾"
11"
12½"
3"
19⅛"
15¼"
23¼"
1¾"
34¾"
4
44"
33"
11"
11"
6"
17¼"
14½"
23¼"
1⅜"
34¾"
5
44"
33"
11"
¼" X 1¾" NOTCH TYPICAL
9¼"
6"
15¾"
13⅜"
23¼"
1¼"
34¾"
6
44"
33"
11"
8"
4"
14"
11½"
23¼"
1¼"
34¾"
7
44"
33"
11"
6¾"
4"
12¼"
23¼"
1¼"
34¾"
8
44"
33"
11"
5"
10¾"
9"
23¼"
1¼"
34¾"
¾" TH'K RIB BEAM
¼" PLY OUTER RIB SECTIONS
¾" TH'K FRAMING MEMBERS
TYPICAL OF FRAMES 1-7
CUT NOTCHES AT ASSEMBLY
NOTCH TUNNEL TOP BATTENS INTO TRANSOM, RIB 8 AND BOWPIECE ONLY
⅛" PLY
¾" X ¾"
¾" X 1"
¼" PLY GIRDER
¾" X ¾" (7)
10⅞" R.
4"
¾" PLY CUT THREE
COCKPIT COVER
¼" PLY BACKING
¾" THICK FRAMING
TUNNEL BOTTOM NOTCHES THROUGH NINE PLACES
FRAME 8 DETAIL
¾" X 1" STRINGERS (2)
1" X 1" STRINGER
SECTION THRU COWL
¼" PLY COWL SIDES
⅛" PLY COWL
DECK
DASH
¼" PLY GIRDER
TRANSOM— 2 LAYERS ¾" PLY— ONE PIECE ¾" X 5" BACKUP
COCKPIT COVER ⅛" PLY X 8' LONG
¾" X ¾" STRINGERS (7)
⅛" PLY
¾" PLY DASH
¼" PLY COWL SIDES (2)
1 X 1
¾" X 1" STRINGER (2)
¼" PLY GIRDER (2)
GLUE BLOCKS
¾" X 1" STRINGERS (2)
¾" COWL SUPPORT
1½" X 1½"
13"
¾" X 1½"
¾" X 2½"
2½" X 6" X 12"
SPONSON PLANKING NOT SHOWN
INSIDE SPONSON BATTEN
OUTER SPONSON BATTEN
BOTTOM SPONSON BATTEN
9"
24¼"
24"
24"
24"
30"
30"
24"
22¾"
17½"
5" X 1"
¾" X 4"
¾" X 4"
¾" X 6"
¾" X 6"
¾" X 3"
¾" X 5"
¾" X 5"
33" LENGTH OF ¼" PLY. FASTEN TO INSIDES OF ¼" GIRDERS
17"
15½"
14"
13¼"
CUT TWO GIRDERS FROM ¼" PLYWOOD
13"
12¼"
10¾"
8"
2"
BASELINE
TRIM OFF AT ASSEMBLY
MAIN GIRDER IN ASSEMBLY POSITION (UPSIDE DOWN)

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engine ⅜ in. to eliminate the blow-out. But before he left he jumped some wakes for us, "which a tunnel-hull should never go near in racing."

Later, with the engine height adjusted, we did get a run at 6,200 and AquaRacer hit 76 mph. It was still not fine-tuned and we lacked the right prop, but that was good enough to tell us we had a winner.

We set up AquaRacer just for racing, but if you tend to get lonesome or want to scare the pants off the blonde down the street you can cut a removable section into the cowling behind the driver and install a removable passenger seat. Our $5,000 racing machine ended up costing us $450, not counting the engine and accessories. ●

PLANS AVAILABLE

Large-scale plans costing $5 and incorporating added instructions are available for building AquaRacer. Order from Mechanix Illustrated Plans Service, Fawcett Bldg., Greenwich, Conn. 06830. Ask for Plan B-2-75-A and enclose payment.

