

Turning a Tamiya Sherman into a Jumbo

By Laramie Wright

The Sherman family of tanks was produced from 1942 through 1945 to the tune of 50,000 units in various forms. Designed to fight the German PzKfWIII and PzKfWIV tanks that had been used to overrun Europe in 1939-40, the vehicle was basically sound, providing good speed, armor protection and armament. Coupled with outstanding automotive performance and reliability, the Sherman design provided the U.S. and subsequent allies with a tank that would serve successfully on all fronts and all climates.

In its combat debut with the British 8th Army in North Africa the Sherman was a great boost to British striking power and in initial fighting, it caused consternation among the Germans when it outranged and outgunned all but the latest PzKfWIV tanks. In addition, the standard 50mm anti-tank gun frequently ricocheted off the turret and frontal armor of the M4A1s used by the British.

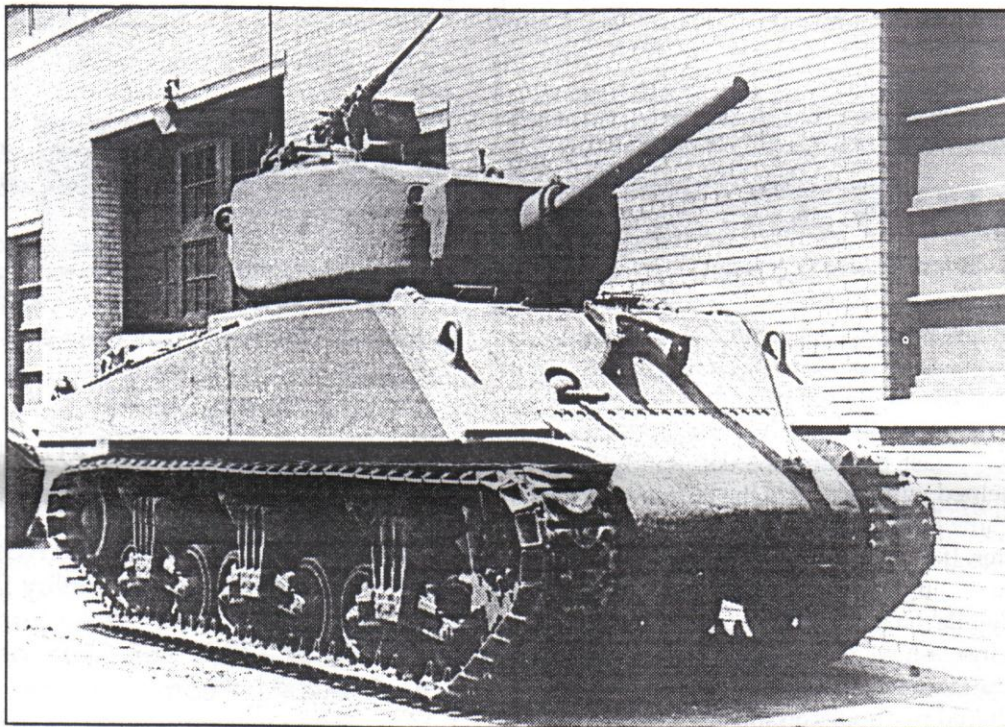
Only the fearsome 88mm dual-purpose gun was a completely reliable stopper. Performance in the harsh North African desert was excellent and established the Sherman's reliability.

Inexperienced American units at first made serious tactical errors in deployment and fighting tactics that negated the strong points of the Sherman. Old-hand Afrika Korps veterans exploited every weakness and failure at first, defeating the U.S. Army at Sidi Bou-Zaid, (the only defeat the Germans

inflicted on the Americans in the war) and nearly winning the battle at Kasserine Pass.

The Americans quickly learned the hard way and made necessary adjustments that laid the foundation for the eventual victory in Europe. Overall the U.S. was pleased with the Sherman and saw no reason for seeking a replacement, or up gunning it.

The Sicilian Campaign and the later Italian operations did nothing to change that view. Though there was some contact with Tiger and Panther tanks in the Mediterranean Theater, they had not posed a serious threat or check to allied operations. U.S. Army Ground Forces doctrine called for tanks to be used as



The M4A3E2 Sherman Jumbo was designed as an assault tank with extra armor in all the key locations, including the turret, the mantlet and the glacis. This increased combat weight by 17,300 pounds.

break through and maneuver forces to shatter and disrupt enemy lines and destroy and displace rear areas. Committed use for anti-tank service was discouraged. The Tank Destroyer Battalions were to counter enemy armor along with artillery and air support.

Our British cousins were not of the same mind. They set about developing a way to mount their new 17-pounder antitank gun in the Sherman, called the Firefly. They did so and offered it to the Americans, who politely declined, having a misplaced faith in the status quo.

By the time of the Normandy invasion in mid-1944, the U.S. Army had developed some concerns about fighting the newer German tanks, and Ordnance had developed a 76mm high-

Continued on page 12

The Styrene Sheet is a monthly publication of the Silicon Valley Chapter of the International Plastic Model Society (IPMS). Articles and comments should be submitted to Chris Bucholtz, Editor, P.O. Box 361644, Milpitas, CA 95036, or by E-mail at bucholtzc@aol.com. Excerpts may be published only with the written permission of the editor.

FROM THE PRESIDENT

Welcome to the May 2K1 edition of the Styrene Sheet!

If you haven't noticed, this month we are meeting at Scenario Games in Fremont, home of the IPMS/Fremont Hornets. Hopefully, in the next month or two, but definitely within three or four, I will have a definitive answer as to where we will be meeting ahead of time, but don't hold me to it. (I hope I'm not sounding like a politician.) We will be meeting at the Los Altos Library in June, though. I will let the membership know what I have discovered about the Milpitas Library.

It now appears that the 1st Annual HornetCon is as big as our Kick Off Classic. Unfortunately I couldn't attend, a major mistake on my part, and I heard that there was over 250 models, built by over 90 entrants/modelers. I'm sure our members who attended will give us a detailed report at our meeting. Kudos to IPMS/USS Hornet and IPMS/Fremont Hornets!

Just around the corner is another "first" model contest. The 2001 Scale Model Contest/Exposition will be held on Satur-

EDITOR'S BRIEF

This issue would not have been possible without the extra efforts of a few people. Of course, our authors—Laramie Wright, Bob Miller, Eric McClure and Robin Powell—provided us with the basics of the issue. But it was the last minute help provided by Randy Ray that made it happen. Randy provided images for both the M4A3E2 and the M29 monitor stories at the very last minute—thanks, Randy! Vladimir Yakubov also helped with images at the last possible instant.

This goes to show how important it is that we have articles for the newsletter. If these articles could have been replaced with others, we could have worked on finding images for another month while more complete stories were included in the newsletter. Instead, we were forced to go with what we had and get illustrations where we could find them. The editor has purchased two books on subjects he has no interest in just because they were needed for this issue of the Styrene Sheet—unfortunate, yes, but probably also unnecessary, given the expertise in the club. If only we'd had that extra month...

The point here is to exhort you to write. The more we have to work with, the better off we are. It'll mean bigger issues and a less stressed-out editor, two things we all can appreciate. (If the editor has to give his spiel one more time about contributions, he expects it will be echoed by the membership word for word because they've already heard it so many times!)

On a more pleasant note... The Chino show is coming up. We always put in a good showing at this event (just don't mention gliders—ugh!), and the setting is ideal. At least a half dozen of us are already going, and we've been going year after year; if you need travel plans, advice, car pool partners or that last bit of convincing, ask the road warriors (Mike Burton, Robin Powell, Randy Ray, Angelo Deogracias, Dave Balderrama, Frank Babbitt, Mike Meek and especially the recently-converted Brad Chun) about it. Win or lose, a contest like this is nothing but fun.

—The Editor

day, June 16, at The Finley Center, 2060 West College Avenue, in Santa Rosa. The contest will run from 0900-1530 hrs (9 a.m. to 3:30 p.m. to you civilian types!) with vendor set up starting at 0800 hrs (8 a.m.). If you need vendor information, contact Tom Young at maiesm72@aol.com for information. If you're online, you can also check their website at www.puffer.net/santarosa.html for contest categories, directions, etc. There will also be areas set aside for display of models as well as contest tables.

Also, I have not been able to find an adequate supply of AMT AMTronic car kits. So, should we find another subject or kit to replace this contest? We will discuss this further at the meeting. It appears that AMT only produced enough to fill the orders that their distributors gave them. That would make the "Millennium" kit a very limited run kit.

I would also like to wish Steve Travis a speedy recovery, and would like to see him at our meeting! Anita, if there is anything you need, please get a hold of me.

And don't forget, next month is *Monogram* Mastery, the first of our internal club contests. Happy Modeling!

—Brad Chun

CONTEST CALENDAR

June 9, 2001: **IPMS/Planes of Fame** hosts its annual contest at the Planes of Fame Museum in **Chino, California**. For more information, call Al Parra at (909) 920-9917 or e-mail him at parateach@aol.com.

June 16, 2001: **IPMS/Santa Rosa** hosts its **first annual contest** at the Finley Center in Santa Rosa, California. For more information, call Dale Bohling at (707) 568-0496 or e-mail him at nachtwulf@aol.com.

September 22, 2001: The Captain Michael King Smith Evergreen Aviation Education Institute and the **Portland and Salem chapters of the IPMS** present their **Fourth Annual Contest** at the new museum housing the HK-1 "Spruce Goose" flying boat in McMinnville, Oregon. For more information, call (503) 282-2790.

October 6, 2001: **IPMS/Vancouver** hosts its **31st Annual Fall Model Show and Swap Meet** at the Bonsor Recreation Complex in Burnaby, British Columbia. For more information, call Kevin Brown at (604) 939-9929.

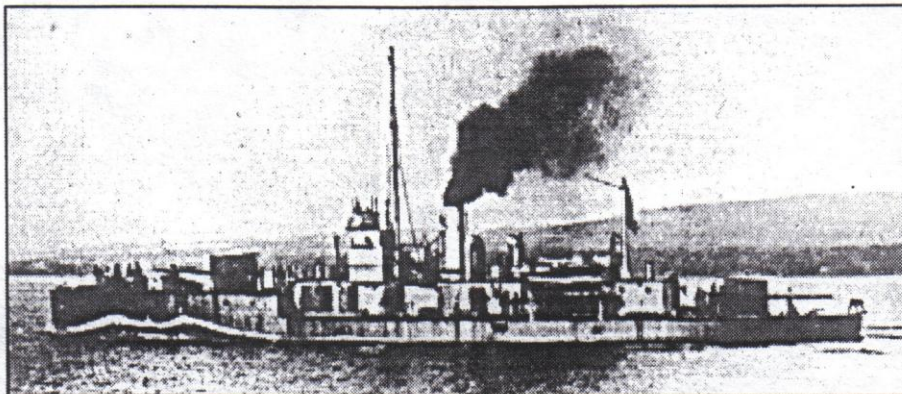
October 14, 2001: **IPMS/Orange County** hosts **OrangeCon 2001** in Buena Park, California. For more information, call Nat Richards at (949) 631-7142 or e-mail him at ocipms@aol.com.

Scratchbuilding the WWI monitor HMS M29

By Bob Miller

"Two ships! How can you have an annual competition with only two ships?" the Grey Admiral asked at the Y2K Kickoff Classic. Too true: there were as many judges as entrants. Bert cornered everyone he knew who was at all interested in ships, getting them to promise they would have an entry for 2001. Okay, I promised, so here I am...

Confronted with actually *finishing* something, I settled on a hull I started back in '98 or so, about which I wrote in my review of *Big Gun Monitors: The History of the Royal Navy's Monitors*, by Ian Buxton. Here was something unique, something I have never heard of in model form (though I admittedly don't follow ship literature closely.) Here was HMS M29.



The 6-inch monitor M29 underway in 1915. Her top speed was just 10 knots.

For starters, M29 didn't have a name. Boats and craft don't have names, but British *ships* were always named. And M29 *was* a fighting ship. It was 177 feet long, displaced some 350 tons light and 535 fully loaded (less than 40 percent of a destroyer escort or German torpedo boat). Yet, it mounted two six-inch guns. To put things in perspective, the six-inch gun was a 5000-ton light cruiser's main armament, or a battleship's secondary armament. Each gun plus mounting weighed 18 tons and fired 100-pound shells. M29 carried 40 tons of ammunition in two magazines that took up nearly 30 percent of her overall length. So they carried a lot of gun for their size. (But not the most, I find: the Italian *Monte Santo's* carried one 15-inch/40 caliber gun on 570 tons. No misprint: that's *fifteen-inch!*)

And what did M29 give up to get this heavy gun armament? Absolutely everything else. Speed was supposed to be 10 knots, but was barely better than nine. She had fuel for only about three days, so was often towed on longer trips. Her five-ship class had been built quickly, taking only ten weeks from order to commissioning, and had dispensed with niceties like bilge keels. As a result they rolled violently with the firing of their big guns and were poor gun platforms except in sheltered waters. Mountings had been provided for two 6-pounder dual-purpose guns, but only one was ever fitted so she was poorly prepared for an air or sea fight. She even seemed to lack a rangefinder as launched, making her dependent on spotting and ranging from ashore.

M29 and her sisters were "monitors," a term which meant something different in the Royal Navy than in the U.S. where the name originated. An American monitor was built for coastal defense, but a British monitor was what, in our World War II nomenclature, we might have called an LSS(G) or landing support ship (gun). Churchill and Fisher, pushing for a big Royal Navy, saw the value of heavy shore bombardment guns afloat and started with the monstrous 12-, 14-, and

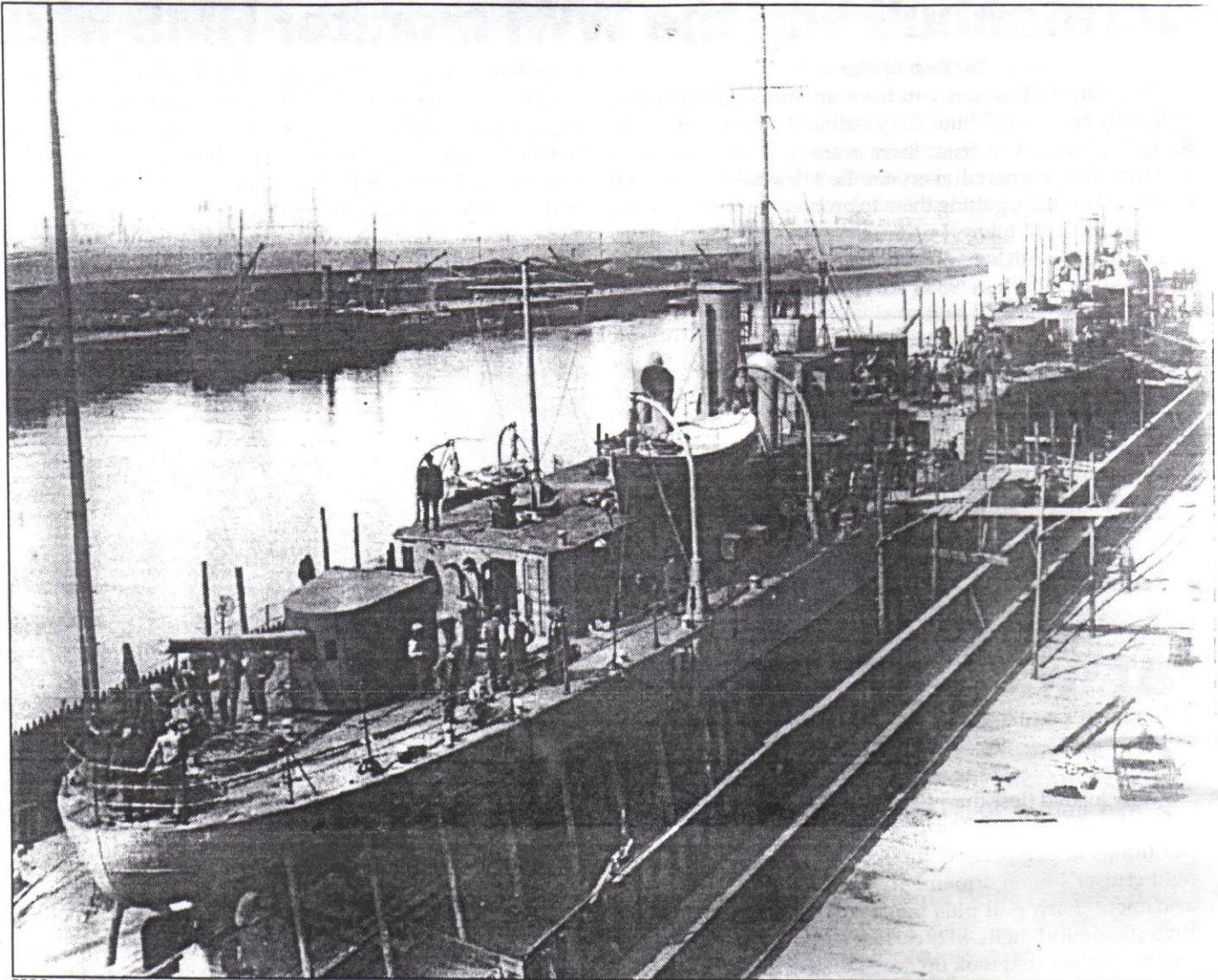
15-inch gun monitors. They then began producing hulls for available smaller guns. M15 through M28 mounted one 9.2 inch gun each, and produced, overall, a *very* unattractive ship. But they could shoot a 380-pound projectile 25,000 yards. They were ordered in March 1915 and quickly sent to support troops in the murderous Gallipoli campaign.

There, the beachheads proved shallow and exposed and landing craft were nearly nonexistent, so the ANZAC's own fire support was practically limited to pack howitzer-type guns. The monitors offered support. They could stand offshore and shoot clear across the Gallipoli peninsula at guns on Turkey's Asiatic shore. Unfortunately, they seldom hit anything. Results could be spotted only by aircraft, which was hardly a perfected technique. Also, as mentioned, the small

hulls were too "lively" for good gun platforms. M23, a 9-inch monitor, claimed to have rolled 57 degrees while firing in the Med and 45-degree rolls were confirmed on several occasions. One might suspect this would not engender confidence in the crew.

The M29-M33 class were nicely proportioned little vessels. I thought, so I picked M29. She was the subject of the best picture in the book, a large stern-quarter shot taken immediately after launch, but there were never two photos of the same ship at the same time. Drawings weren't complete: there was a full deck plan plus side elevation for the M15 sub-class, but only an elevation and photos for M29, so interpolation and guesswork were needed, a shaky start for a good scale model. The only copy of Buxton's book, the only source of which I am aware, is at the Maritime Museum Historical Library at Fort Mason in San Francisco. I did not copy all the photos at sufficient enlargement the first time up there. Later, after my model was essentially finished, I carefully re-copied them. Embarrassing details follow.

For the hull, I tried an unusual construction material: acrylic. (Plexiglas, if you wish) It is a very pleasant material to shape, taking very crisp edges and finish-sanding beautifully, especially given the very simple hull shape with no compound curvature except at the stern. Acrylic drills very nicely at Dremel speeds right down to #80, if you remember to alternate drilling then backing off to cool. It is a bit harder than styrene to glue, because ordinary household stuff like methyl-ethyl-ketone doesn't touch it. I used cyanoacrylate (super glue) entirely. This seemed to work well enough, but browsing through a ship-modeler's forum on E-groups.com I found one old-timer advising a beginner to stay away from CA. He felt that it was very nice to work with and all that, but was untested: it might fall apart in 25 or 50 years, for all anyone knows. These wooden-ship folks build for keeps!



M29 and M31 in the Workman Clark shipyards in 1915 just before their launch. These vessels went from order to commission in a very short space of time.

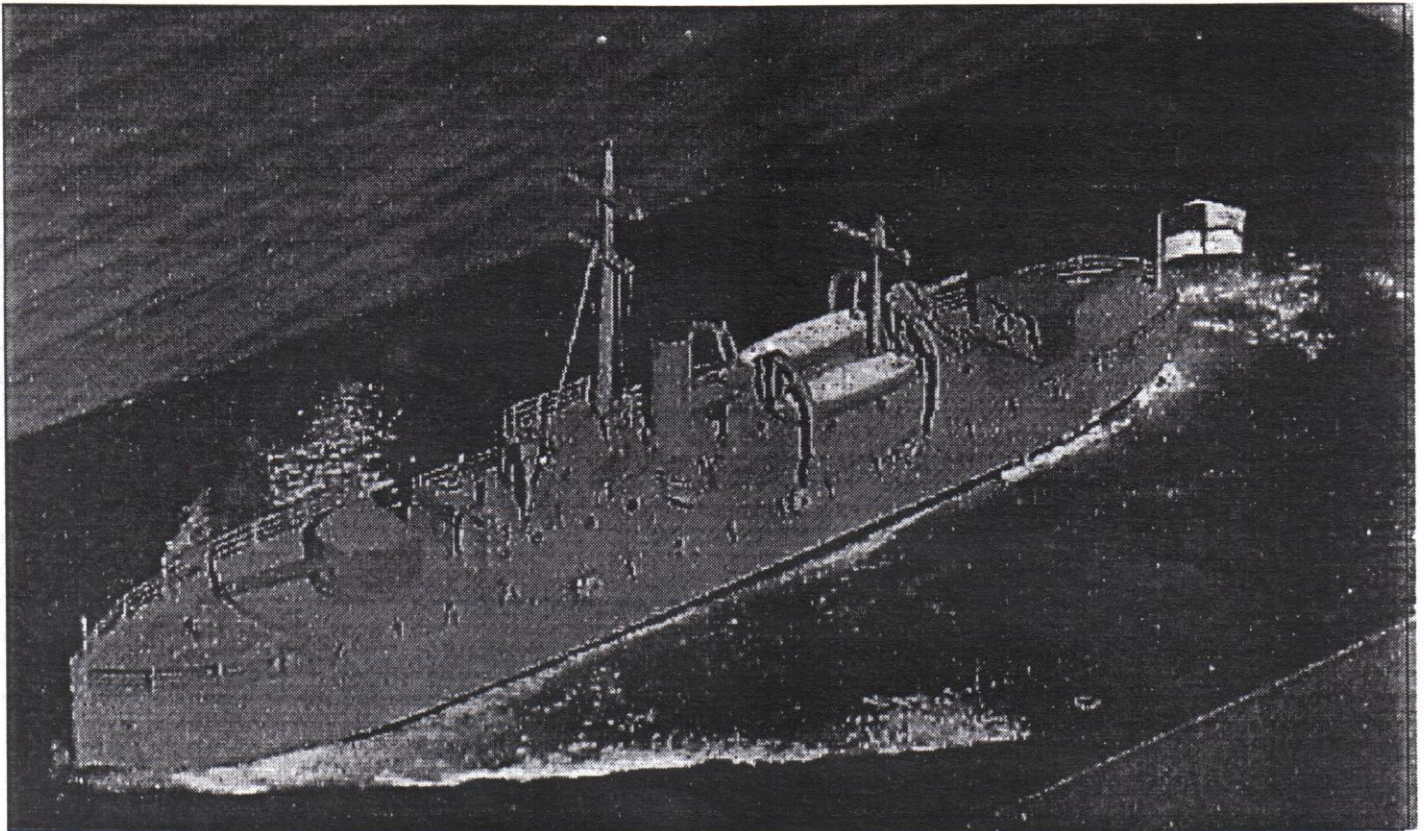
I found a worse downside to plexiglas later. I opted to paint with *Tamiya* acrylics, and found that they don't stick worth a damn to the smooth finish I used. (However, Bert later told me acrylics don't stick to *anything*, smooth very well. It was mildly comforting to find it wasn't just my ineptitude, but it was annoying having to touch up repeatedly and still find brass glinting on contest day.) I later found myself trying to represent a pair of 1mm diameter magazine hatches behind each big gun, and found that acrylic is too hard to either scribe or press-indent with any equipment I have in that size: I tried to simulate the hatches by picking up paint with surface tension on a 1mm tube and placing it carefully on the deck. After the Classic, a judge told me that my chances for a win had been ruined by what appeared to be two random spots of paint on the deck behind each of the guns. I brooded over this for a while, then put a sharp edge on the end of a piece of brass tube, chucked it in a pin vise, and twirled it between my fingers to scribe circles. The paint, of course, flaked off the whole area and started a new round of touching up, but at least small scribed hatches were now in place.

On the other hand, having used fine copper wire to represent real copper wire antenna and downloads, I was told that

another defect dooming my model was my forgetting to paint the copper wire used in the rigging. "Wait," I'm thinking. "*Real* isn't realistic enough?" Bert to the rescue again: subtlety was the key. I went over the copper with flat finish to kill the glint a little.

Portholes can be made very neatly in acrylic by drilling shallow holes, just deep enough to reach full drill diameter. Before painting, set up a jig in a Dremel or similar drill press, and you can place portholes in an accurately aligned row. Then after painting, simply drill out the paint (the drill will self-center now) and you have a perfect simulation of a transparency, complete with a tiny glimmer of light coming from the opposite side if you backlight the model. I did the engine room skylight by simply rubbing the paint off the facets and got a similar satisfying result. A warship doubtless would have used steel hatches with portholes, rather than glass, but I liked this so well I left it transparent.

A surprising corollary advantage to modelling in acrylic is that acrylic and brass make a supremely beautiful model if done well (preferably, better than I did) and left *unpainted*. In the right lighting, the model sparkled and refracted like crystal. My wife didn't want me to paint it, and considering



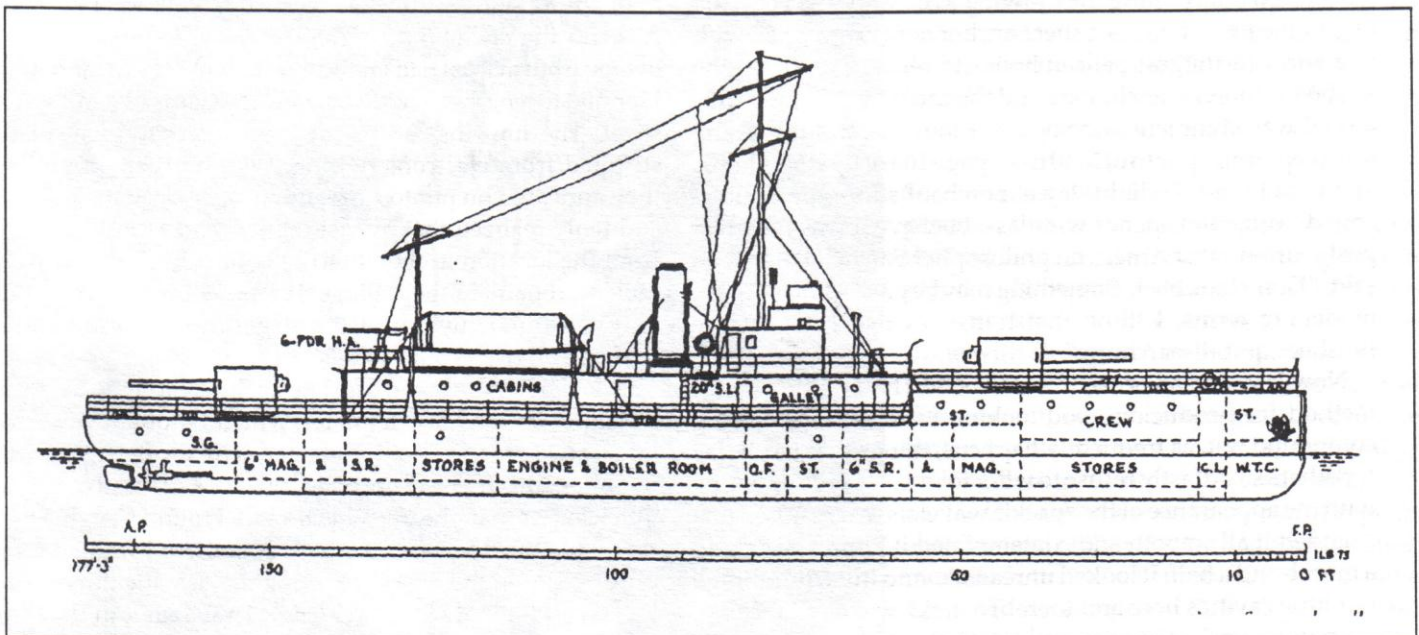
Bob's M29 underway, sort of! Bob made the hull from plexiglas and borrowed brass and plastic details from a number of different manufacturers.

my likelihood of scoring in a competition, I now would forget the whole idea and just leave it the jewel it was.

Sheet metal parts like gun shield faces were brass, typically 3-mil sheet. I lacked a plan view of the 6-inch ship, so I cut and tried 10-mil styrene tops and bottoms until the visual effect was satisfyingly like the photos, then wrapped the brass faces around them. There is a single searchlight abaft the conning tower, mounted on rails to allow it to be shifted to either beam as it may be needed. Surmising that a correctly modeled pair of rails in this scale was probably beyond me, I used a single

15x60-mil flat brass to suggest tracks.

Stainless steel tubing was used in several places. The six-inch guns were 35-mil tubing built up with CA glue to approximate the taper toward the breech. Boat davits were a type unusual in warships: short vertical sleeves were attached to the deck, with the davits themselves swiveling in them to allow the boats to be swung around and out. I chucked stainless steel tubing in a Dremel and sanded to a satisfying taper, then parted off with carbide wheel. The sleeve was slipped over the finished davit, the davit glued



The general layout of the M29 class left little room for seakeeping features, not to mention crew amenities

into a hole in the hull, and the sleeve dropped down into place. For the merchant-ship type ventilator cowls, I cut off tubing on a long diagonal and rolled the point over. I could not curve it quite far enough to be true to scale, but decided it was satisfactory, and it *was* hollow. I believe this application actually needed stainless tube: even if I had brass in the appropriate diameter, I doubt that it would have been ductile enough to take the bend.

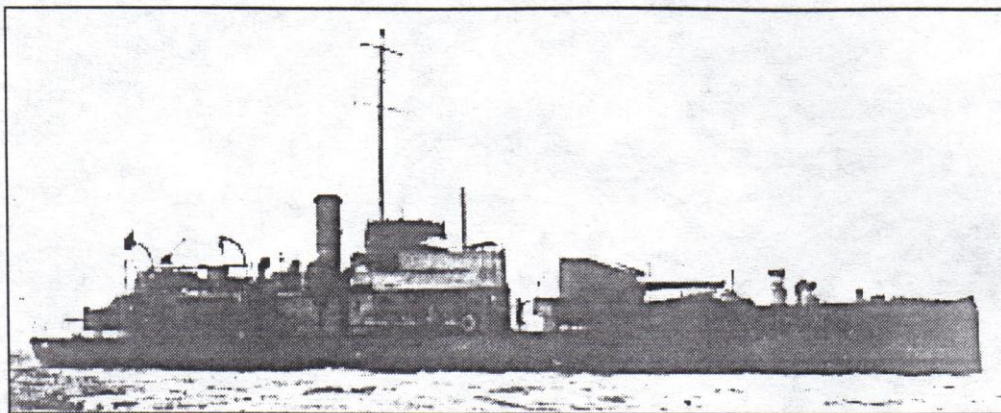
For anchors, I had a sheet of 1:700 stainless steel anchors on chains from *Gold Medal Models*.

Admiralty pattern anchors would have been correct, but the only ones small enough for M29 were Danforth pattern. Until I tried stainless, I had thought brass etched parts were hard to handle. Surprise! Stainless simply refused to bend and lie flat on the deck. I had to use so much glue to keep the chains in place that using Danforth anchors was the least of my problems.

I found myself with another problem interpreting the deck plan I had, which was for the 9-inch ships: there were two anchors but only one anchor windlass. This seemingly can't work. In raising one anchor, you would inevitably lower the other, according to the drawing. Yet it fit the faster-cheaper- (well, maybe not *better*) concept of the class. Browsing my *Anatomy of the Ship* book for battleship *Warspite*, I had one of those satisfying "ah-hah!" moments. Ships often carry a spare anchor. On *Warspite*, it was the aft of the two starboard anchors, and the capstan was a brake only, with no power to raise the anchor. The mains are "bower" anchors, the spare a "sheet." So interpreting the drawing as carefully as I could, I rigged the port chain as a sheet anchor across the deck, with fine wires to suggest pelican hooks to retain it, and ran the starboard (bower) anchor around the capstan. After my M29 model was complete and shown, I looked carefully at my much-enlarged photo of M30 from page 108 of Buxton's book. There, in broad daylight, lay a merchant ship-type double-ended horizontal anchor windlass. I believe it was the great post-existentialist American philosopher Satchell Paige who said, "Don't look back. Something may be gaining on you." In modelling terms, I think that translates to "When you're finished, quit researching."

Now I needed an ocean to sail it in. Bert had written up his method for producing good-looking water with spackling compound but, as frequently happens, things that work fine for others steadfastly refuse to work for me. I was so unhappy with the appearance of the spackle wavelets that resulted that I sanded it all smooth and contemplated it glumly for about a month and a half. It looked unrealistic, and my wife pointed out little cavities here and there. To make wavelets ahead of the bow wave, I hit upon transparent household acrylic caulk, which shapes very nicely with a small brush, holds the shape

you give it better than spackle, and adds depth when applied over paint. My wife pointed out that the little cavities were still there. I would have tried artists' acrylic colors for white-caps, here, but due to work we are doing on our house my acrylics are unreachable, so I went back to poking aimlessly



Of similar origins but different design were the 7.5-inch monitors like M23, pictured here.

about the Internet. There I found a modeler who suggested (and as Dave Barry so often says in his columns, "I am not making this up!") *tooth paste*. Hey, I'll try anything once. Colgate is too smooth and too green, but

Pepsodent wasn't bad, although it took a very long time to dry. And finally, at long last, I could call my wife and tell her "Look, Ma! No Cavities!"

While Bert suggested leaving the model free to pull out of the water, M29 was simply too small to give my fingers anyplace to grip without damaging or dropping it, so I glued it in. The brass railings had to be installed and painting substantially completed before gluing it in. I don't like brass. I am too old to even *try* to install 1:700 brass railings. Bert's technique calls for positioning the railings with small strips of masking tape, then applying CA glue between tapes, removing the tapes after it hardens, and then completing the gluing. Hint: don't let the glue reach the tape, or you will glue the tape adhesive to the railing, filling in the spaces between rails and producing an effect like an out-of-the-box *Matchbox* kit. I cut away affected railing and glued in short replacement segments. The repairs looked very bad.

Essentially everything was scratchbuilt except rafts, searchlight, the 6-pounder and the boats. These came from *Skywave*. As with the anchors, the smallest boats I could find were oversize but at least had enough wall thickness to sand down. I sanded to length and glued in new transoms of 5-mil styrene sheet. The life rings were cut from a length of insulation stripped from electronic wiring. While it seemed unlikely, they appeared on photos to be hung *outboard* of the railings. I suddenly realized that by just relocating the rings a few feet from the location in the photos, I could cover up the worst-looking repairs in the railings. It worked rather well. Is that why you armor guys put all those spare track links and rolled-up tarps all over your models?

I used invisible thread for rigging. Interestingly, the thread measures about 6-mil diameter, which I thought was overly large, so I first tried 4-mil tungsten wire for mast stays. This may have been closer to scale, but looked vastly oversize, much larger than the invisible thread. I found CA glue beads up on the thread everywhere except where I wanted it (and putting CA on the deck and trying to place the thread into it looked appallingly bad) so I tried tying a knot in the thread and cutting off as close as possible. The knot nicely holds just enough glue. As mentioned, antennas and downloads were 3-

mil copper transformer wire. This had a dark insulation, but I reasoned that in a maritime environment, copper would corrode and dull to about the color of the insulation.

Early World War One colors do not seem to be very well documented, but there seemed to be agreement on the internet that it should be a greenish-grey. I used *Tamyia* acrylics to mix a slightly greenish color that seemed to agree with the best photo. There was no camouflage and no numbers visible in any photo of the class. The sides of the 6-inch gun shields, oddly enough, appeared darker than the other surfaces of the ship, so I darkened down some paint for these. This seemed implausible, except that the monitors' guns were taken complete from other applications, and perhaps they were not even repainted upon arrival.

So, it was done. Was it worth it? This was my first attempt at a good ship model since my kitbashed IJN *Shoho* a number of years ago. 1:700 is a devilishly hard scale for a beginner, particularly with a small model like this, because the small size invites you to move your eye in close until the ship fills your fine vision. That's about six inches away, and every detail is painfully visible. And my hand tremors are as large as the spacing between railing levels, which makes for a lot of hard-to-fix kinks here and there. If asked for advice by another newbie shipbuilder, I would suggest 1:350 or 1/400 for simplicity. Yet this one had to be 1/700 to show the contrast in size between M29 and other fighting ships, not only the big carriers and battleships, but even Bert's gorgeous escort carrier with which it shared the table. I was pleased with the result.

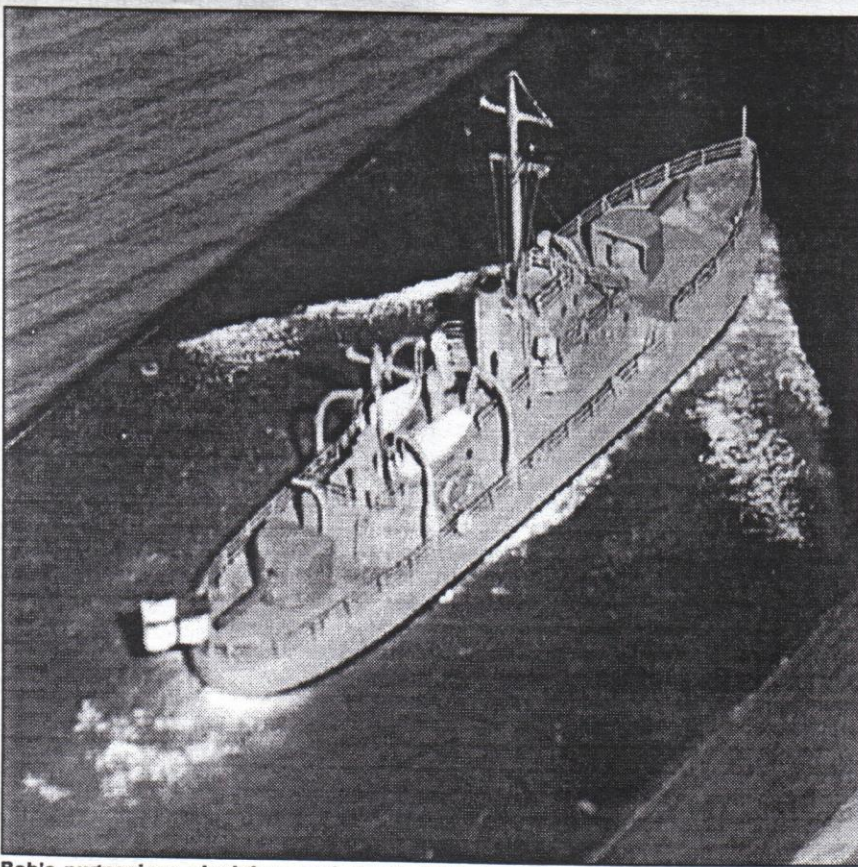
Then, what of the outcome of the small monitors? Mention "World War I at sea" and you think Jutland, the Falklands, the

Lusitania, maybe Coronel and Dogger Bank. But *Gallipoli*? This was a deadly, disastrous campaign. It cost six battleships, one large monitor, and a variety of small ships sunk, cost some 200,000 casualties, ruined a dozen reputations including Churchill's, and accomplished absolutely nothing. The 6-incher craft fired some 700 rounds covering landings at Suvla, then throughout the rest of the campaign alternated patrols of a few days off the beaches before heading back to Mudros Island to refuel and replenish. Despite the ships, there were no dramatic breakouts from the beaches and the most the monitors could do was interdict supply lines up the peninsula and reply when Turkish gunners began bombarding the troops. Even then, with their unarmored magazines and with Turkish troops commanding the entire ridge of the Gallipoli peninsula and spotting for the guns, they could not risk sticking around for a shootout and often had to retire. They rated barely a mention in R.R. James's extensive book *Gallipoli*. Troops were finally withdrawn in the one really well-executed operation of the entire campaign and the peninsula went back to slumbering in the Mediterranean heat.

The little monitors went on to other jobs. Ten remained in the Med, ranging from Smyrna, Turkey to Egypt and providing useful gunfire support. In one unusual action, M19 and M33 took part in an anti-aircraft shootout against Zeppelin LZ85 over Salonika. A cruiser was finally credited with downing it. The last of the 9-inch ships had their guns replaced with 7.5-inch guns because of the violent roll the big guns produced, then were assigned to Dover to cover the West end of the British line on the Continent. In 1919, several were used on the rivers of Russia to support White Russian forces against the Bolsheviks.

Post-war, the 9-inch survivors were sold off to become small river tankers because of their sizable magazines and shallow draft. The RN retained the 6-inchers as minelayers, finally giving M29 a name in 1925. She became HMS *Medusa*. Too slow even for minelaying, she spent WWII as a tender at Malta and was scrapped in 1947.

One more surprise awaited me, though. On the net shortly after the 2001 Kickoff Classic, I found hints of a small monitor still in existence. I finally tracked down M33, now named *Minerva*, dry-docked and under restoration. She's the last existing RN monitor. Not surprisingly for something built quick and cheap, she had been in poor shape, held together in places only by rust. There were several photos, including one bow-on shot in clear sunshine with strong and well-defined shadows. I had thought the hull had straight vertical sides except for the compound curve of the fantail, but there it was, a dashing, seaworthy-looking flare to the bows. That only enhanced her (so I thought) neat and purposeful appearance. Instead of the rather stodgy bucket I had modelled, this touch probably would have produced a very pretty little ship. As I said earlier, "When you're finished, quit researching. You can only embarrass yourself."



Bob's pugnacious plexiglass and plastic M29 chugs along, pulling a very convincing Pepsodent wake!



No. 41 Squadron was only one of two to operate the Spitfire Mk. XII, and most photos of the type are of No. 41 Squadron aircraft. The aircraft in the foreground was flown by Flight Lieutenant Don Smith, an Australian who scored one of his five victories in the Mk. XII.

Mix and match for low level: Spitfire XII

By Robin Powell

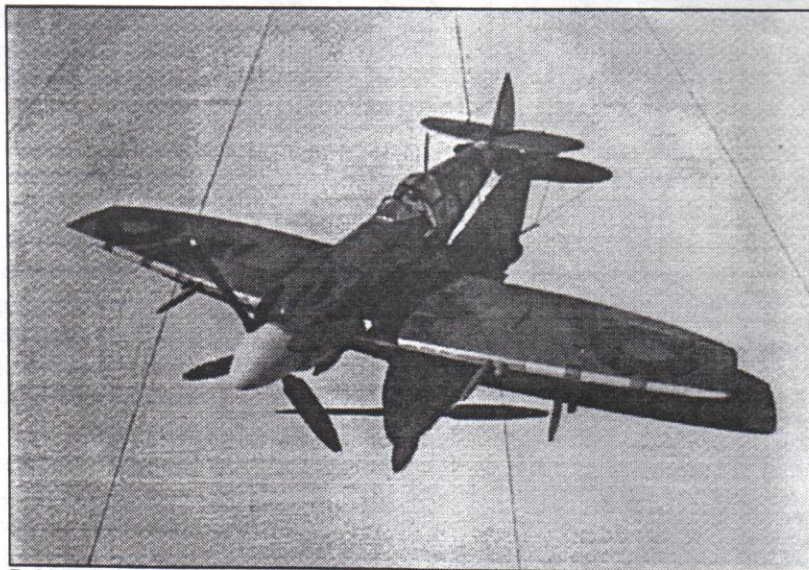
The Spitfire XII was a bit of a black sheep. Conceived as a quick way of fielding a low-level interceptor to counter the Fw 190 tip-and-run raiders, only 100 were built. By all accounts, it was very fast at low level and it fulfilled its intended role, serving with 41 and 91 Squadrons. It was the first Griffon-powered Spitfire to enter production and the only one to be fitted with a Griffon with a single-stage supercharger.

To model a Spitfire XII I employed a very similar approach to that I used for my Spitfire XVI—i.e., a Falcon fuselage with a Cooper Details cockpit set. However I needed a C wing with one radiator. The best-shaped single radiator wing is to be found in the Airfix Spitfire VB. It lacks the surface detail and fineness of the Japanese offerings but the shape is the best.

To convert a B wing to a C is fairly involved. The upper wing bulges are dealt with using the new cannon bay covers supplied by Falcon, so once the huge B blister had been whittled off I marked out the position of the C cover and cut the appropriate areas away. The rest of the upper

wing needs re-scribing, but rather than following the raised Airfix detail, I moved the inner of the Browning access panels outboard to the C wing position on the other side of the wing rib. I also filled the gun barrel hole in the leading edge and re-drilled that in the new position.

On the underside the large blister had to be removed. I did this by filling the inside with Zap-a-Gap and then sanding it flush. Three small blisters needed adding to each newly smooth undersurface, one by the cannon shell slot and two smaller ones by those for the Brownings. I made these by carving the half-teardrop shape on the end of a piece of



Robin's Mk. XII was made by combining an Airfix Spitfire Vb with the Falcon vacuform conversion.

styrene strip and then making a large number of impressions in a piece of modelling clay. I then poured Alumilite polyurethane casting resin into the small cavities thus formed. Once set, I had a resin wafer with a dozen or so of each size of blister. I picked the best and fixed them in place with a drop of runny superglue.

With the Falcon cannon blisters installed in the upper halves I assembled the wings before cutting off the tips to the clipped planform of the XII. Note

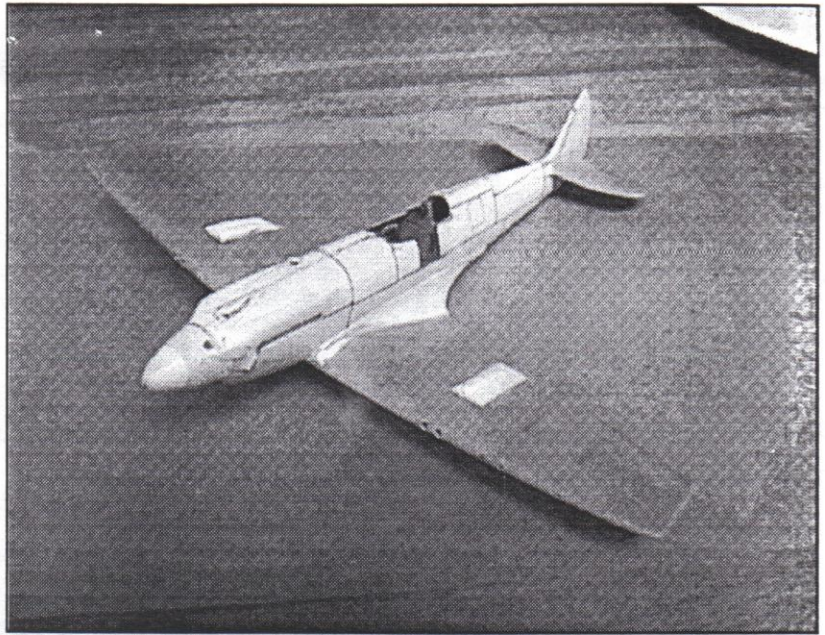
that the clipped tips fitted to the XII were somewhat more square and severe than those found on XVI's and late XIV's.

To detail the fuselage halves, I scribed in surface detail to match my work on the wings. My pictures of *Spitfire* XII's show prominent fasteners on the cowling panels, so I depicted these by drilling very small holes and then filling the back of each with a drop of PVA. I was using another set of *Moskit* exhaust stacks so I built shelves for these to sit on later.

To fill up the cockpit I used the *Cooper Details Spitfire V* set. The only difference in the cockpit between a V and a XII was a stirrup pump for the engine primer and the Coffman starter. I admit that as I could not find out quite where these gadgets were I did not add these to my model. There. Now you know. My model is not 100 percent accurate.

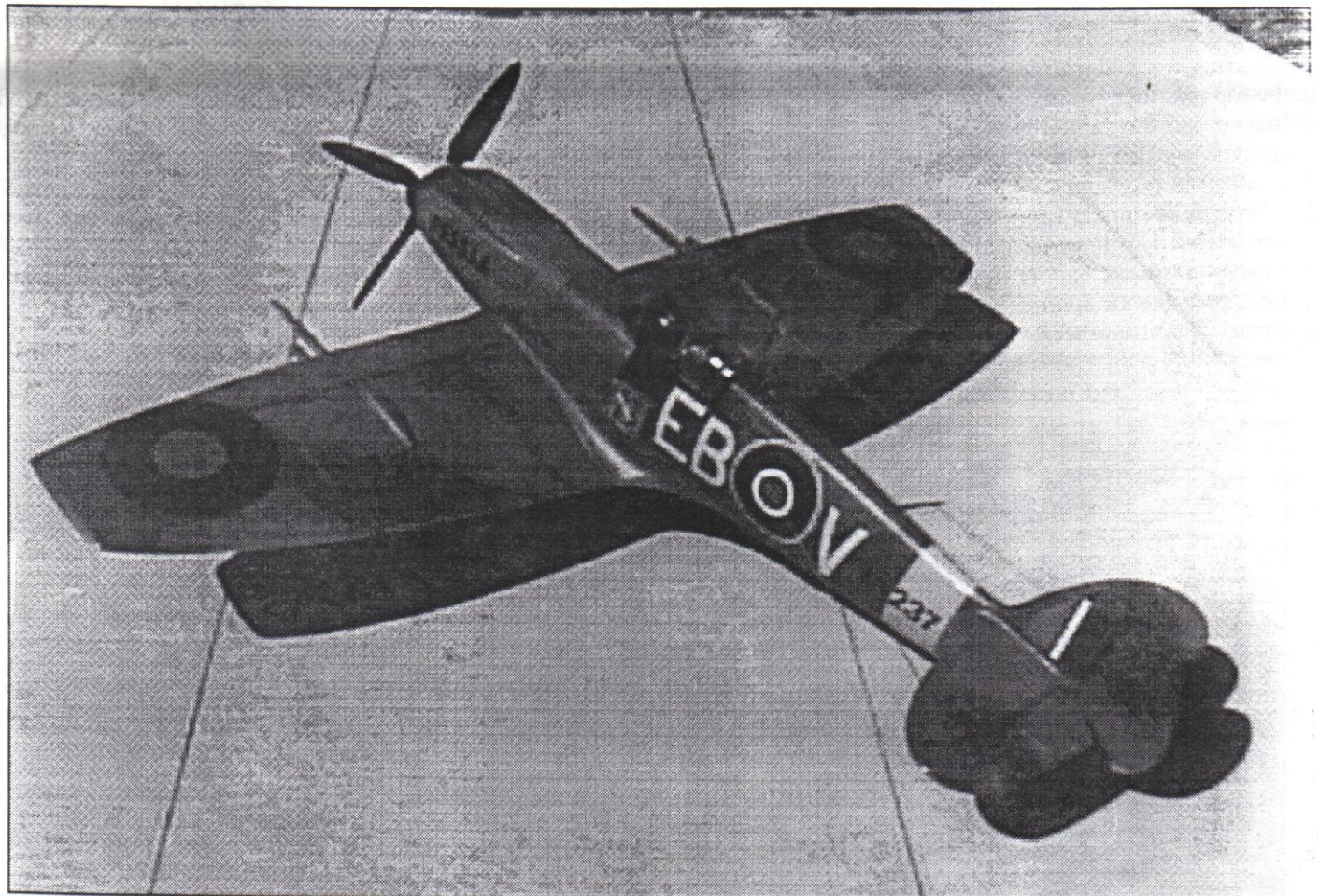
Some *Spitfire* XII's had a retractable tailwheel and some didn't. The one I decided to model was that flown by Wing Commander T.F.Neil DFC, AFC, AE and this aeroplane had a fixed tailwheel, so I was spared the task of making a well for it. This aeroplane also had the early pattern of elevator horn balance so I could use the *Airfix* items.

Having brought together the main chunks of the model and dealt with the surprisingly few areas that needed filling and sanding, I turned to the clear parts. I decided on a serious

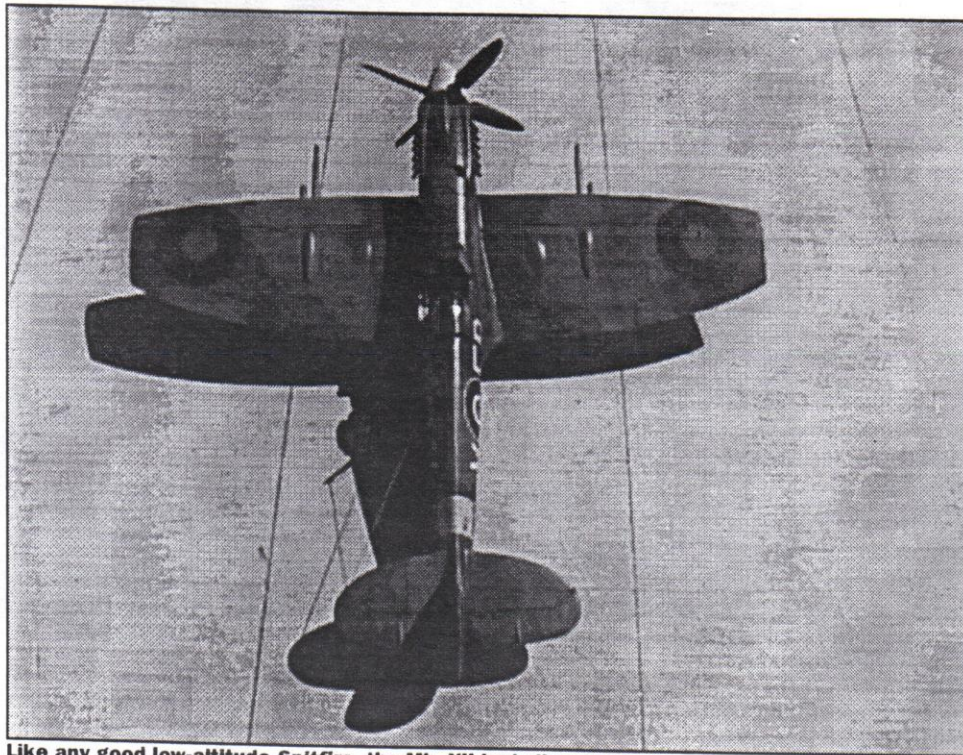


Before painting, it's easy to tell which bits are *Airfix* and which are *Falcon*.

plundering exercise. The *Hasegawa Vb* kit has a superb windscreen so I robbed one and it fitted as if intended for this use. I also used the *Hasegawa* rear fixed section. For the sliding hood I robbed one from a *Tamiya Vb* which snapped into place in the slots in the fuselage sides. Then I popped it off again to re-fit after painting.



Robin's model depicts the aircraft of Squadron Leader Thomas Neil, OC of No. 41 Squadron. Neil, a Battle of Britain veteran, scored 12 victories but all came before the arrival of the Mk. XII.



Like any good low-altitude Spitfire, the Mk. XII had clipped wingtips. The addition of the Griffon engine made it one of the first effective weapons against the V-1.

I used *Model Master* enamel paint over a primer of *Halfords* Aluminium to allow for selective weathering later. *Model Master* have good renditions of RAF colours and they airbrush very smoothly. I sprayed the underside in Medium Sea Grey first, masked with paper tape, sprayed Ocean Grey over the top and then set my Badger 150 to a tight fine line and freehanded the camouflage pattern in Dark Green. I also sprayed a patch of decal film at the same time for use as canopy framing later.

With this paint dry I gave the whole a coat of Future (Kleer) and started decalling. *Aeromaster* provided most of the decals. I used their basic *Spitfire* stencilling set and used roundels from their generic *Spitfire/Hurricane* set. The squadron codes came from yet another *Aeromaster* sheet. I was going to use the Sky fuselage band from the *Airfix* sheet but it proved to be so thick and unresponsive to setting solutions it

looked like I had wrapped and glued it on with the backing paper still in place! I wiped it off and used the one from *Tamiya* sheet instead. I also used the *Tamiya* decals for the yellow leading edges and red machine gun patches, suitably cut about to fit the repositioned guns.

I used dry transfers for the serial number from a Chartpak sheet. My previously painted decal sheet was sliced into thin strips and found itself depicting windscreen and canopy frames.

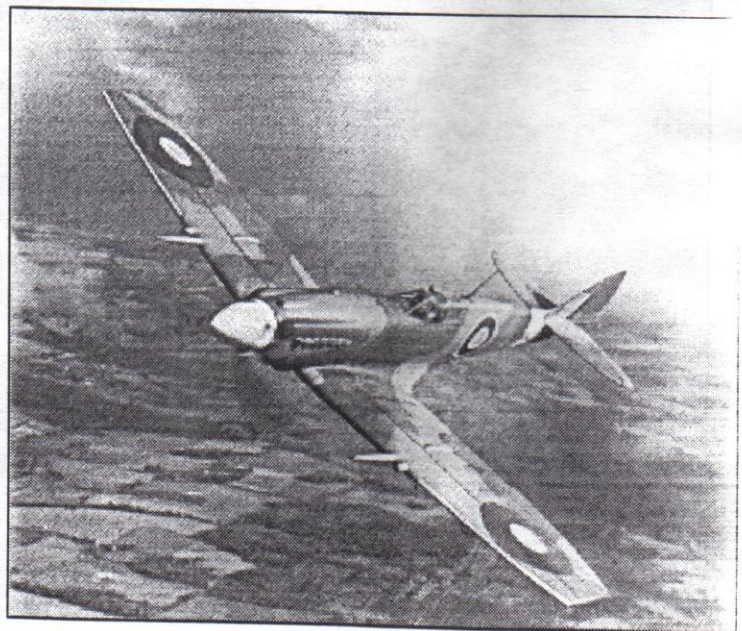
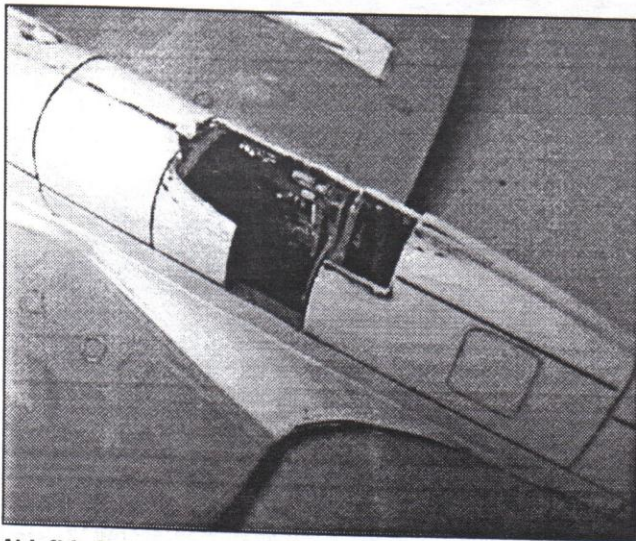
With the decorations complete, I again masked the clear bits and gave the whole model a coat of *Humbrol* Satin Cote. This is wonderful stuff with just the right degree of sheen to it for a mid-war fighter. Now for the peripherals.

The spinner and propeller came from *Falcon*, the white metal blades cleaning up nicely with the right shape already cast in. The undercarriage and 5-spoke wheels came from

the *Airfix* kit as did the tailwheel. The *Airfix* kit also provided the radio mast. *Tamiya* provided the clear identification light blisters. With these parts and the beautiful *Moskit* exhausts in place I suddenly had a *Spitfire* XII in miniature.

The *Falcon* fuselage really captures the features unique to this rare *Spitfire* and the end result has none of the Frankenstein's monster look that might have resulted from its multitude of origins

Having learnt the ropes, so to speak, on my Mark XVI model, this one went very smoothly and only took two weeks from start to finish. I'm really happy with it but I still have that nagging feeling about a missing stirrup pump and Coffman starter...



At left is Robin's cockpit, built with the *Cooper Details* interior. At right, MB882, the last *Spitfire* Mk. XII built, in its element.

A heavy-duty conversion of the M4A3E2

Continued from page 1

velocity gun that was mounted in a new design turret. Still, the area commanders chose the standard Shermans armed with the original 75mm gun, preferring the ability to keep the superior high explosive capability with what was thought to be adequate armor piercing capability. Events in the bocage country of Normandy soon proved they were wrong.

Poor tactics by inexperienced troops attacking dug-in German forces led to high casualties, and a frantic search for a

quick way to redress the balance was on. M4A1 76mm Shermans were in great demand, and the German heavies were doing dreadful damage to standard Shermans with seeming impunity. The Allies were losing between three to five tanks for every Tiger or Panther destroyed. The British had 25 percent of their Shermans equipped with 17-pounder guns, and when properly used they could reverse the German gun power advantage.

However, Panthers and Tigers were still wreaking havoc among their formations as well.

The 76mm-equipped Shermans were better than the 75s, but the really effective hyper-shot ammunition was in short supply. Extra armor was welded onto the turret and front glacis to try and survive.

Somewhere in the Army hierarchy someone had foreseen the need for a heavy tank to be used for fighting in the built up areas of Europe. A new assault tank design was discarded but the idea came about to up armor the good old Sherman and make it a stopgap assault tank. Fisher Body built 256 of them in early 1944 and by late summer they were in France where they were an immediate success. Designated the M4A3E2, popularly called Jumbo, they were an amazing stretch of the basic Sherman.

Hull armor was increased by 1.5 inches on the sides and front making it 3 inches thick on the side and 4 inches on the front glacis. Due to the 47 degree slope of the glacis, the equivalent thickness was nearly 6 inches. By comparison, the Tiger I had frontal armor 4 inches thick and placed vertically. The transmission housing was increased to 6 inches while the turret had a frontal thickness of 6 inches behind a 7-inch thick

mantlet. The 75mm was retained, and the armor added 10 tons to the vehicle. Automotive performance fell off, with increased gas consumption and wear. Top speed dropped to 22mph.

In return for the automotive performance degradation, the Jumbo provided a hard to kill tank that could absorb punishment that would have destroyed any standard Sherman. Their use as column leaders gave the opportunity for the

Americans to deploy and kill the German tanks or anti-tank guns once they had revealed their position by firing. Jumbos generated confidence in their crews and negated many of the advantages the defenders had trying to stem the American Blitzkrieg of 1944-45.

By early 1945 many of the Jumbos were re-equipped with the 76mm gun. With improved hyper-shot ammo readily available, it was

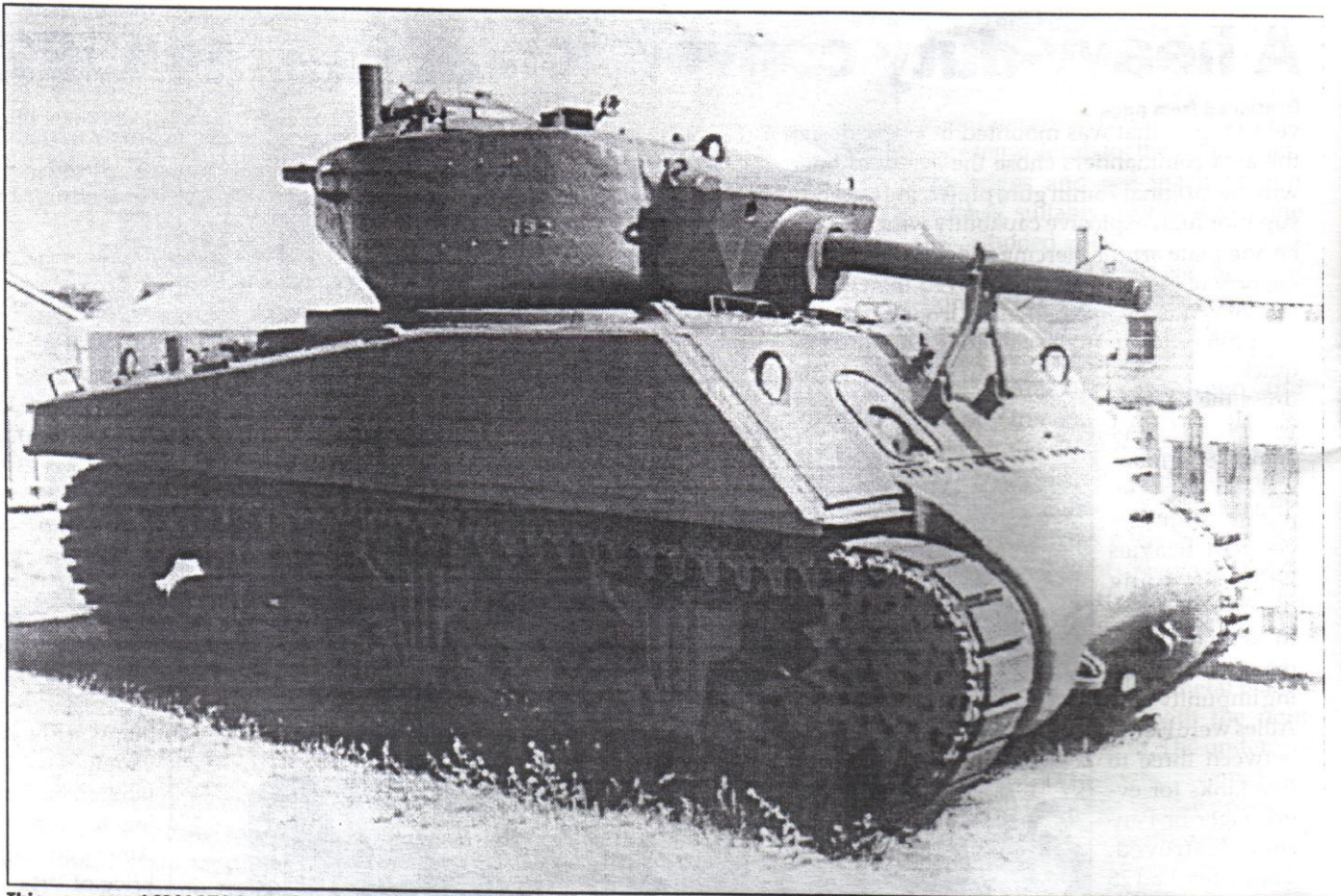


A Sherman Jumbo of the 743rd Tank Battalion near Altdorf, Germany on Nov. 27, 1944. The crew has sandbagged the glacis and then covered the sandbags with camouflage netting.

a potent machine. It is fascinating to speculate what would have happened had the U.S. Army accepted the 17-pounder gun and put that on the Jumbo.

On to the model. I began by using a *Tamiya* issue they called a Jumbo that I had originally built six or seven years ago. Based on their very good M4A3 kit, it contains a new turret and appliqué panels for the front glacis and sides of the vehicle. The add-on armor works well and beefs up the hull. Unfortunately, the *Tamiya* folks neglected to supply a new part for the up-armored transmission housing. I had debated using styrene and putty to re-contour the transmission housing, but around that time *Panzer Concepts* had just released a resin Jumbo housing that looked great. I had built the kit conventionally then with little improvement or added detail beyond blanking off the sponsons with sheet styrene.

Last summer I got the urge to re-do the Jumbo after a visit to the Littlefield Collection where they have an actual example. I hauled the old model out and, after checking photos and drawings, determined that the kit turret was not right. What to do? Well, putty and styrene came to mind, then I saw an ad for the *Tank Workshop* Jumbo Conversion and found the turret at a reasonable price from *R & J Products*, so I went that



This preserved M4A3E2 is at Fort Ripley, Kansas. The beefed-up mantlet is very evident here, as are the casting numbers on the turret.

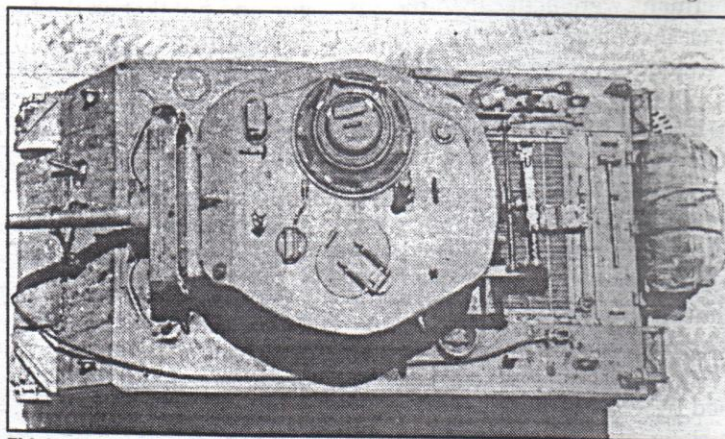
way. The *Tank Workshop* turret was a two-part, hollow-cast item that went together beautifully. The turret kit also has a turned-aluminum 75mm barrel and various detail parts. The rough-cast texture is very well done, including casting numbers. A nice Jumbo turret results with a little bit of work.

I added some photo etch detail to hatches and periscopes from the *On the Mark Sherman* set and scratch built a working pintle mount for a .30-cal. machine gun mounted in front of the commander's hatch. Using aluminum from a coke can and straight pins, I fashioned a yoke and pintle that provides for elevation and traversing of the *Italeri* Browning .30-cal. MG. I also moved the M2 .50-cal. mount from the mid-rear of the turret to the left front corner where the loader had access to the awesome firepower of Ma Deuce. I based the machine gun mountings on photos in the *Squadron Sherman in Action* and *Concord's Sherman at War* books. The same photos showed a 76mm-armed Jumbo, so I replaced the 75mm barrel with a *Tank Workshop* 76mm barrel. The mantlet-mounting hole was drilled out to accommodate the larger diameter barrel, which fit great after a few quick twists.

The hull itself was the subject of a good deal of detail improvement. All weld seams were redone to more accurately portray the real items. The *Tamiya* kit has these molded below the surface of the joined armor plates when they should stand proud. I used *Tamiya* putty applied in a thin coat between two strips of masking tape, then textured the beads with the tip of a #11 X-Acto blade to look like nice weld marks. Based on viewing the welds on an actual Jumbo, this effect should not be overdone, so I kept it restrained. The major joints where the front glacis and side panels meet were

also detailed and textured. I added vertical weld seams on the side panels that were missing on the kit parts again using the tape/putty method.

On the front glacis there was not much to do as the Jumbo lacked the headlights and horn mounts and guards found on a regular Sherman. I did detail the travel lock using a wire ring for the unlock pull ring and strip plastic fashioned into the retain-



Thicker armor changed the shape of the turret, as this shot shows.

ing hook and bracket. I used superglue to build up the welds where the lift rings were attached. I added a tow cable bracket to the transmission housing and detailed the tow clevis mounts

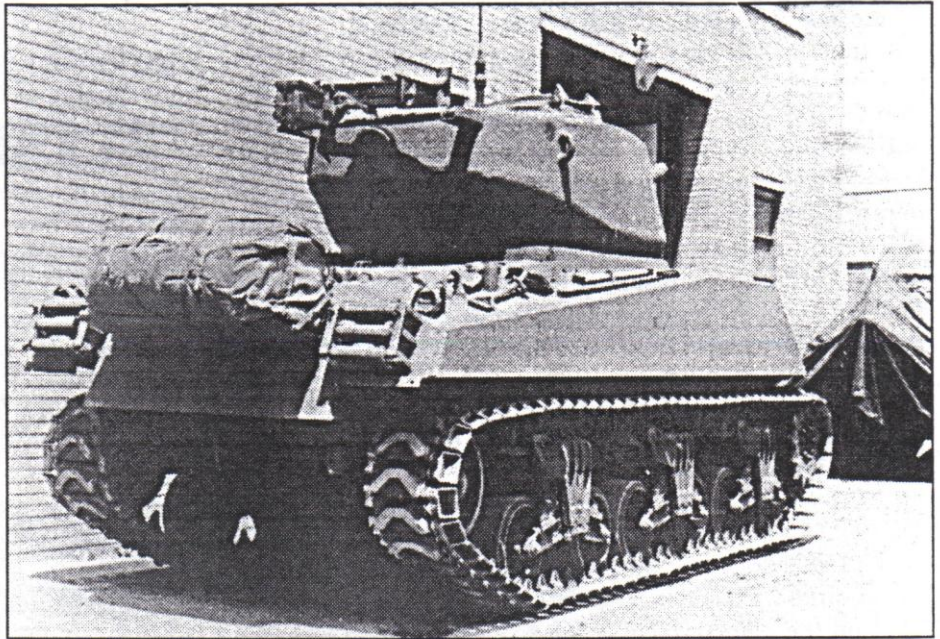
with styrene strip and rod.

Sand shield mounting brackets were added to the lower hull edges. I made these from styrene strip and used a *Historex* punch and die set to put the boltholes in them. Once the holes were measured and punched, I cleaned up the edges and tacked the strips in place with liquid cement, then firmly glued them with super glue when satisfied they were in place.

The rear hull and engine deck were detailed with *On the Mark* and scratch-built brass and aluminum strip pieces and parts. All locating holes for tools were filled then brass or plastic brackets and straps were installed to secure the pioneer tools. The tools were mostly from the kit, with the molded on brackets and straps removed. I added superglue to the bases of lift rings to beef them up and added tow cable brackets at appropriate locations on the hull. Additional detail was added to the spare track shoe brackets on the rear hull using strip plastic, rod and brass wing nuts. A much better appearance resulted. The luggage rack was detailed with strip styrene and photo-etch was used to detail the cleaning rod mounts beneath.

The rear hull panel was detailed by replacing the door grab handle with wire and adding a few bolt heads. The exhausts were cleaned up and their outlets opened up using files and sand paper. The exhaust deflector was seriously reworked to open it up. The deflector is molded solid and needs to be opened and then the grills require rebuilding to regain proper depth. I used my Dremel to hog out the majority of plastic removed, then cleaned up with files and sanding sticks. Grill detail was rebuilt using sheet and strip styrene, taking care to keep the openings sharply defined.

Stowage was added to the rear deck using tissue soaked with dilute white glue tied in place using thread. A set of



A rear view of the M4A3E2, showing the machine gun stowed on the turret bustle. Extended end connectors on the tracks helped prevent the heavy tank from sinking into soft terrain.

Italeri U.S. jerry cans were added to the luggage rack and an aerial recognition panel was added made from sheet lead, generously donated by a bottle of Merlot.

The bogies were detailed by drilling four holes in the face of each to simulate the mount points for the return roller brackets and adding bolt heads to the track skids on top of the bogie assemblies. I used the kit tracks, but am considering replacing them with *RHPS* link-to-link tracks with different style duck-bill extenders.

The vehicle was primed in Rustoleum gray auto primer when I took it and another Sherman to the August 2000 meeting. On the way back to my car after the meeting, I dumped the box carrying them and watched tank parts go flying all over the parking lot. With the able assistance of what seemed like everyone in the club, we recovered all but one minor piece. All major assemblies were sprung and seams split necessitating a major rebuild. However, all's well that ends well and I was able to rebuild the damaged kits.

I painted the tank in *Tamiya* Black Green as a pre-shade then went back over it with *Tamiya* Olive Drab to establish the base coat. I used washes and dry brushing to pop out details and weather the vehicle. The running gear and tracks were painted overall with a mixture of black and dark earth that looks like road dirt. The gear was dry brushed to bring out detail and the road wheel tires were painted dark gray and drybrushed. The all-steel tracks and duckbills were drybrushed with steel and highlighted with silver. The drive sprocket teeth and track guide teeth were also highlighted with silver. The model was over coated with *Floquil* Dust as a final coat.

Whew, finally another Sherman added to my collection. I enjoyed the project and tried new things, some of which worked well and some that did not.



An M4A3E2 re-armed with a 76mm gun rolls through Alzey, Germany on March 20, 1945.

MARCH MINUTES

At the April meeting, Brad Chun scared us with news of his possible temporary relocation for work training purposes. Don't worry—it's not going to happen. Brad will fill us in at our meeting... Which, by the way, will be held at Scenario Hobbies in Fremont this month. We'll be back to one of our library locations in June—stay tuned to your newsletter, or for you nerds out there, your World Wide Web page!

Our AMTronic contest may have to be put off because of limitations on the number of AMTronic kits AMT saw fit to produce. If we plan a substitution, you will all be informed of it in a prompt manner.

In model talk... Richard Hubbart built several subjects for *TamiyaCon*, including an F4U-1 *Corsair* that he was coached through by Steve Palfy. Richard's other creations included an AMT woody wagon, complete with surfboard and a 1:72 Fw 190D-9. One model that didn't quite make it to *TamiyaCon* was a 1:48 Dora; after finishing it, Richard dropped it, and it never quite went back together right ever again! It still had a spot on the display table at Aliso Viejo, Richard reported. Dave Balderrama is planning to make the *Muroc Models X-38* the subject of his next spacecraft build. Dave also brought in his *PM Models Ho 229*, which he uses at work as a letter opener! Jerry Newborn showed off a few wargaming pieces, and his "real" subjects were pretty unreal, including a scratch-built bike made from three or four different kits and a series of modified Hot Wheels cars finished with Acura gold automotive paints. Tom Spargo's project is to replicate the historic radio towers of the Bay Area. He's started with a photoetched kit of the KSAN tower, resplendent in red and white. When it's finished, the tower will be placed on a base with a light sensor, and when the light gets dim enough, fiber optic "lights" in the tower will come on! Tom's marketing the kits, and he's looking for a builder; for details, give him a holler at (408) 977-7659. Jim Lund has some of Gordon Steven's original patterns and pulls in his collection of model history. He demonstrated this by showing off masters and parts for a Curtiss *Raven* kit that dates back three decades to the start of the vacuform industry. Jim has more than done his part to keep that industry thriving, as he demonstrated with a Boeing YB-9 prototype and a Curtiss P-31 *Sparrow*, both in 1:72. Paul Burnett has chopped his way through the *Polar Lights* reissues of the old *Aurora* movie monsters series, populating the table with Dracula, the Wolfman, Frankenstein's Monster, the Mummy and more. He also used a vulture and some bats and rats from *Polar Lights'* customizing set to add an extra degree of creepiness to his creatures! Speaking of creepy, Paul found some *Starfix* kits on sale cheap and picked them up as practice models, something the membership all got a big kick out of. Tom Trankle has his *Tamiya Beaufighter* painted in its Mediterranean camouflage and is now adding exterior details, like new engines from *Cutting Edge* and repositioned flaps and elevators. Most of his improvements, he says, are now invisible! Ben Pada's most recent 1:48 wonders are a *Tamiya He 219* and a *Hasegawa F-86E*, which now has a *Jaguar* interior and *AeroMaster* decals thanks to Ben's attentions. Greg Plummer has a truly original mind, as his latest diorama will attest. Greg's "Afrikasaurus" unit is comprised of *Tamiya Velociraptor*, which are conveniently molded in 1:35. They're equipped

with German equipment and a Panzer 1, making them not only capable of hunting in packs but of invading the low countries of Europe in a daring lightning strike. Greg also got original with *Tamiya's* Peugeot World Rally Car, converting into a lovely street rod and finishing it in *Tamiya* Mica Blue paint, and he's doing hard labor on *Trumpeter's* 1:48 J-8 fighter/battering ram. Laramie Wright's got yet another Sherman in progress, this one a survivor of a parking lot fall last year but now getting close to being a finished M4A1. Laramie's also put in yeoman work on a *Monogram* P-400 *Airacobra*, which is now rescribed and looking about ready for paint, and an *Otaki N1K1-J Shiden*, which Laramie says is not bad for its age. Chris Hughes says the *Alan* kit of the Panzer 1F is very clean, considering its Eastern European origins. Chris is building it with some extra details from the *Eduard* brass set. Randy Ray says *Tamiya's* new Marder III is the best military vehicle kit he's ever seen. As an example of this, he cites the four-part armor on the hull, which goes together well and preserves the bolt detail. Chris Bucholtz has dragged out his old *Heller T-28 Femtec*; he's converting back to a T-28C *Trojan*, starting with a new *Engines and Things* R-1820. Chris has also finished the masters of the *Obscureco Tempest* Mk. V interior set and he's got the first example fitted into an *Academy* 1:72 kit. Cliff Kranz revisited one of his favorite kits of the past, the *Revell P6M Seamaster*. Cliff's also finished another monster of the air, a Tu-144, which might be missing its wheels but still looks great in an in-flight pose. Vladimir Yakubov has a new project under way: building *Cambri* kits from Russia! Vladimir had four Russian vessels (wessels?) from the turn-of-the-century period in various states of completion. Also on the table from Vladimir and the Russian Navy was a *Hasegawa* 1:72 I-16, finished as an element of the Baltic Fleet in 1941. Frank Babbitt is doing a major rework of the rather awful 1:48 AA J-8 kit. He's had to thin the wings, scratchbuild the non-existent wheel wells, provide his own tail pipes, and fill and rescribe the comical panel lines. Brad Chun's latest dream project (as in, no time to build, but plenty of opportunity to dream about it) is *Tamiya's Gekko*, an early example of which he recently picked up. Brad also displayed the *Obscureco* wheels for the 1:48 *Mustang* and F4U-5/7 *Corsair*. Robin Powell took a big hunk of resin from *Magna Models* and turned it into a Supermarine *Attacker!* Robin said the kit was the nicest resin model he'd ever built, and the only problem he really had was from a stray drop of superglue accelerator that keeps staining the paint from below! Robin's now embarked on building a scratchbuilt model of the AH-56 *Cheyenne* in 1:48, focusing on the wide-winged sixth prototype. Ron Wergin used his handpainting skills to finish off four airplanes this month: a *Tamiya* Bf 109E-3, a *Hasegawa Hurricane*, a *Revell* Bf 109G, and an *Airfix Spitfire* Mk. I. Steve Travis was inspired by a street rod he saw at the Good Guys car show, so he took an AMT '32 Ford and set about building his own. Steve also did a '29 Ford dragster inspired by a real item he saw in Fremont. Bill Ferrante's A5M2 "Claude" was apparently engineered by someone of a similar cloddish bent. This *Fujimi* kit—a recent release, by the way—has thick trailing edges, terrible fit, and absurdly deep panel lines on the tail surfaces. Bill's also building a *Academy*

Bf 109G, which he says is very much like the *Hasegawa* kit, right down to the errors in the tail and nose. At least it fits together better than the Claude! And the model of the month

goes to... Bob Miller and his M29 monitor! Bob left early, but his article in this issue details how he built this little ship with the big gun. Congratulations to all our modelers.

SVSM BOOKSHELF

Half-track: A history of American Semi-Tracked Vehicles
By R. P. Hunnicutt

This is the ninth volume in Hunnicutt's ongoing history of American armor. It traces the development of the half-track in the U. S. starting in 1918 up to the Army's decision to develop fully tracked vehicles. The book is 240 pages and printed on high quality paper, with 540 photos. All the images are sharp and clear. This book is not for the modeler looking for in-action photos of half-tracks, though there are some photos of half-tracks in action at the back of the book. The meat of the book is found in the development photos of each type of half-track designed or proposed by the Army. There is also a chapter that covers half-tracks used in the Korean War with a side view drawing of an M16 with factory batwing armor installed. There is also a comparison photo of field mod armor and the batwing armor.

Each vehicle has at least two photos. There are also a 1:485-view drawing of each major vehicle. With the drawings and photos in this book, a modeler could build every half-track vehicle ever developed by the U.S.

While the book is a great help to the modeler, there are still some shortcomings in it. I would have loved some photos of the engine compartment without the hood installed. While there are some good photos of the engine itself, there really are not any of how the whole compartment looked. I would have also like to have seen more detail photos of the different armament systems that were used on half-tracks, especially the anti-aircraft versions.

This book is a must-have for any serious modeler of U.S. armor. Those with just a passing interest in U.S. armor would

be better off with either the Concord book on half-tracks or the Squadron "In Action" book.

—Eric McClure

B-24 Liberator Units of the Fifteenth Air Force
By Robert Dorr

This soft-cover book is the 21st in Osprey's combat series on combat aircraft. It is 96 pages long, with clear photos throughout the book. There are 30 side view profiles of *Liberators* covering aircraft from 1943 to the end of the war. There are also six side view drawings in the back of the book. The book covers the history of the Fifteenth Air Force based in the Mediterranean Theater of Operations (MTO). There are three chapters, each covering a year of operation, with one introductory chapter with some crew memories about flying the B-24 and a prologue dealing with the Ploesti mission.

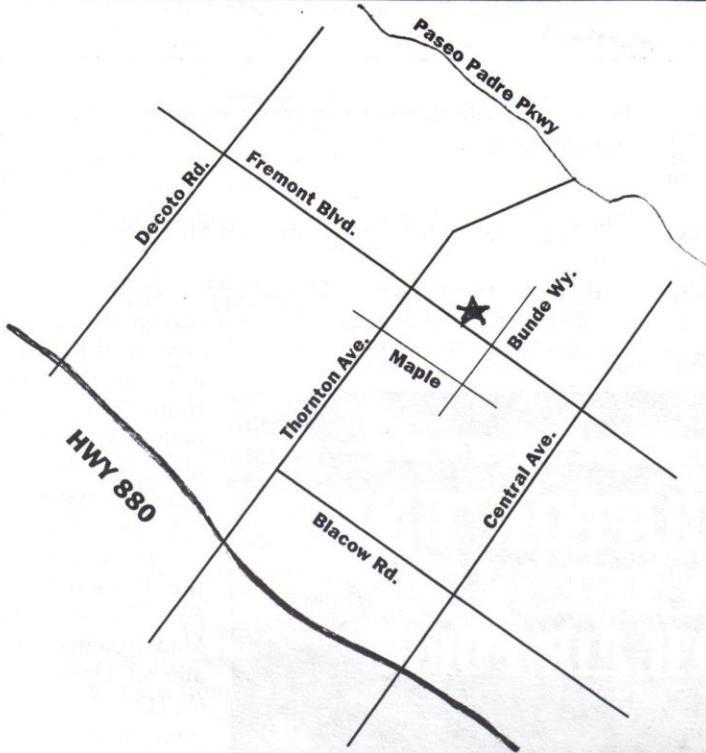
In my opinion, this book was rather dry. While there were some crew reminiscences, most of the book deals with unit movements and history. The profiles, while nice, are not particularly exciting since the 15TH AF had very boring markings (and the color used for the olive drab seems very dark). Some of the photos are new, but

most have been seen before. The one interesting fact that I picked up was the plan to re-equip all the B-24 squadrons with the B-24N model if the war continued past 1945. All in all, I would rate this book to be 5 out of 10. If you have to have everything on the Lib, I would still look for this book on sale.

—Eric McClure



SVSM's BAY AREA TOUR CONTINUES!!



Next meeting:
7:30 p.m.,
Friday,
May 18
at Scenario Hobbies,
37120 Fremont Blvd.
Fremont

For more information, call the
editor at (408) 723-3995

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Don't forget: If your renewal date is red, it's time to pay your dues!