If your boat is an old boat, and already has paint on it, you must expect a little unpleasant work to start with, namely, getting rid of the old paint. If this is not done, you are leaving a great deal of unnecessary weight on your boat because, in a Class A boat, for instance, it is easy to add three pounds actual weight in paint by the method usually employed by the unskilled painter, that is, unskilled in this particular type of work. Secure sufficient paint remover and do the job as per directions on the container; or mix equal parts benzol and denatured alcohol. The latter is best, since it contains no wax, which is used in commercial paint removers to increase their speed of operation and also to hold the remover in an active state for a longer period. The reason I advise against this commercial remover is obvious: a certain amount of wax will stay in the wood, and even a good turpentine wash does not remove it all, and no paint will penetrate wax and penetration is the secret of successful adhesion or sticking quality of paint. That is why painting on glass has only a short lasting period as compared to wood.

After the old paint has been removed, be sure to wash your boat thoroughly with a stiff hand brush and gasoline that is free from oil. Better buy your gas chemically pure from a druggist, or strain it through druggists' filter paper. This may seem nonsensical to you, but I assure you you will be well repaid for the trouble. Let your boat dry overnight: This will give the nap of the wood a chance to lie down again, as the wetting raises a noticeable fuzzy nap on soft woods.

We are now at the stage of practically a newly constructed hull, and the following applies to those who have just completed a new boat.

Secure some sandpaper in the following numbers and quantity: 6 sheets of No. 1 (never use coarser than this except for removing chisel marks from carved models, when No. 3 can be used); 12 sheets of 2/0 (commonly called double aught) 12 sheets of No. 320 wet and dry; and 12 sheets of No. 400 wet and dry. Also get ten cents' worth of pulverized rotten stone for your final rub before waxing.

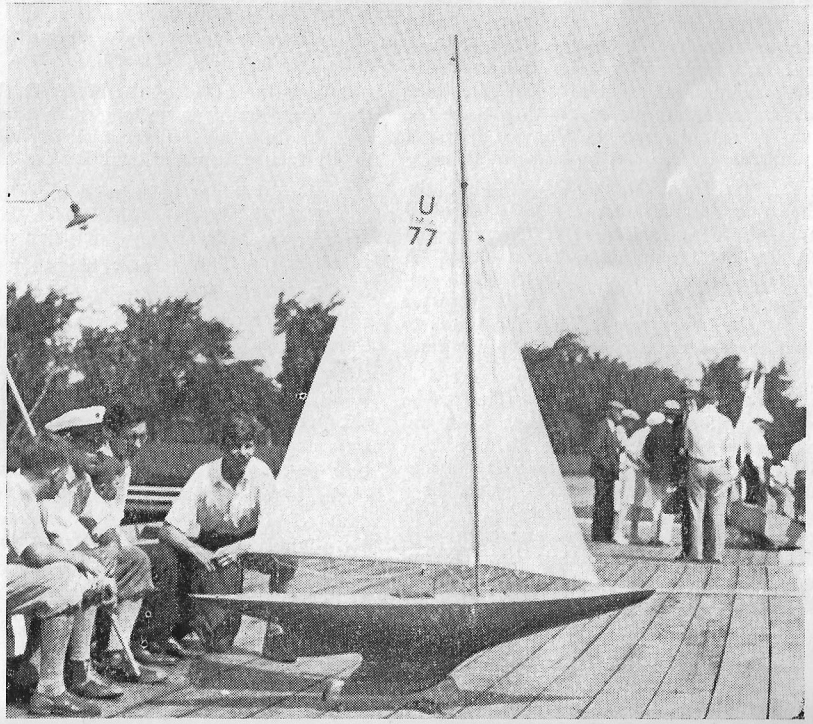
Before you do any further work, you should secure white lead for the part of your boat that is to be painted. (I will tell you of bright finishes after I have told you of painting.) For an A or B Class boat, take 5 lbs. of pure white lead. Personally, I prefer Dutch Boy or any other that is made by the old Dutch method. This fact is generally stated on the labels. We are going to "draw" our lead, and this is how and why. Add turpentine and mix thoroughly to a heavy cream, then set it aside overnight; next day you will see a film of oil on the top. This oil is what we want to remove, so by tilting the can slowly we pour off the oil. Mix with turpentine again until it is like light cream and let stand till the next day, when we again pour off the surface oil, and our white lead is ready for use, since we have removed the oil we don't need and retained only that amount of oil necessary for penetration and building, and we thin *only* with turpentine to a thin consistency. Strain it through cheesecloth of close weave *every time it is used.* This removes the skins and rebreaks the pigment.

Let us now go back to our sandpaper. Sanding is not a laborious job if properly done. I have seen hundreds of men sweat themselves lean sandpapering. Very little pressure is required to make the ground glass on the paper do its work. When you use great pressure you not only tear the wood fibres, but you also tear the sharp glass from the paper and fill the remaining glass with pulp (or paint where the surface has been painted). Take your No. 1 sandpaper and rub back and forth lightly, that is, with just a slight pressure of the hand; never use a circular motion, and, wherever possible, use the rubber sanding block which costs $1.00, or cover blocks of wood, made to shape, with old flat rubber. When all the deep ridges are removed from the wood and it looks and feels smooth to the touch, repeat the process with the 2/0 sandpaper until the entire surface is smooth as silk. This is necessary to secure a good finish with very little labor. It is necessary to keep the hands spotlessly clean when handling work that is to be finished clear, that is, varnished over the wood.

We are now ready to paint our boat.

The best investment we can make at this time is a 1½-inch camel-hair brush (flat) at a cost of from $1.50 to $2.50. This brush, if properly cared for, will last for years, and can be bought by a group of men who have no further need for it than painting one or two models. The care of the brush is simple. After using each time, wash thoroughly in gasoline, dry off with a rag, and grease with vaseline. In painting, use the thin drawn white lead for each coat, applying with the camel-hair brush. Do not expect to see a *white* boat after the first or even the fourth coat of paint. Allow 36 hours at least for the drying of each coat, and when each coat dries, sandpaper lightly with 2/0 sandpaper until the surface feels glassy to the touch. If you want to waterproof your boat before painting, use Casco glue, mixed thin, and apply two coats, inside and out, before any paint has been applied. This gives you a hard surface that is impervious to water, and is painted on with a cheap bristle brush. Four hours are allowed between the first and second coats of glue, and eight hours between the second coat of glue and the first coat of paint. After the fourth coat of paint there should be enough of the paint sanded off to show the wood in only a few high points, such as at the stem, or transom edges. It is then we must use extreme care in handling, both with paint and sandpaper. Apply three more coats of lead as before, but allowing 48 hours at least between coats and sandpapering, and sandpapering with the No. 320 wet and dry, using a wet sponge in one hand and the sandpaper in the other, keeping the surface wet while sanding and immediately drying off with chamois when a portion is completed. Remember at all times that hard rubbing will ruin your job, while gentle massaging will give you a beautiful glass-like surface that will remove all brush marks. We are now ready for our waterline and underbody finish. If it is to be light colored underbody such as gray, light green, etc., secure colors in oil much darker than you want and mix them with clear turpentine, to which add not more than ten drops of japan dryer. This for about one-eighth pint of thin color. Pour this color into your drawn white lead until you have secured the tone desired, and proceed as for the white part of your boat. Where the entire boat is to be painted dark color, do the entire job except the last two coats as just mentioned, when you can use a good four-hour enamel, diluted with turpentine, for your actual coloring.

(*Continued in December*)



The American Champion, *Bostonia IV*, Designed and Built by John Black